JANUARY, 1954

WOOD and Wood Products

THE NATIONAL MANAGEMENT AND PRODUCTION MAGAZINE OF THE WOOD INDUSTRY

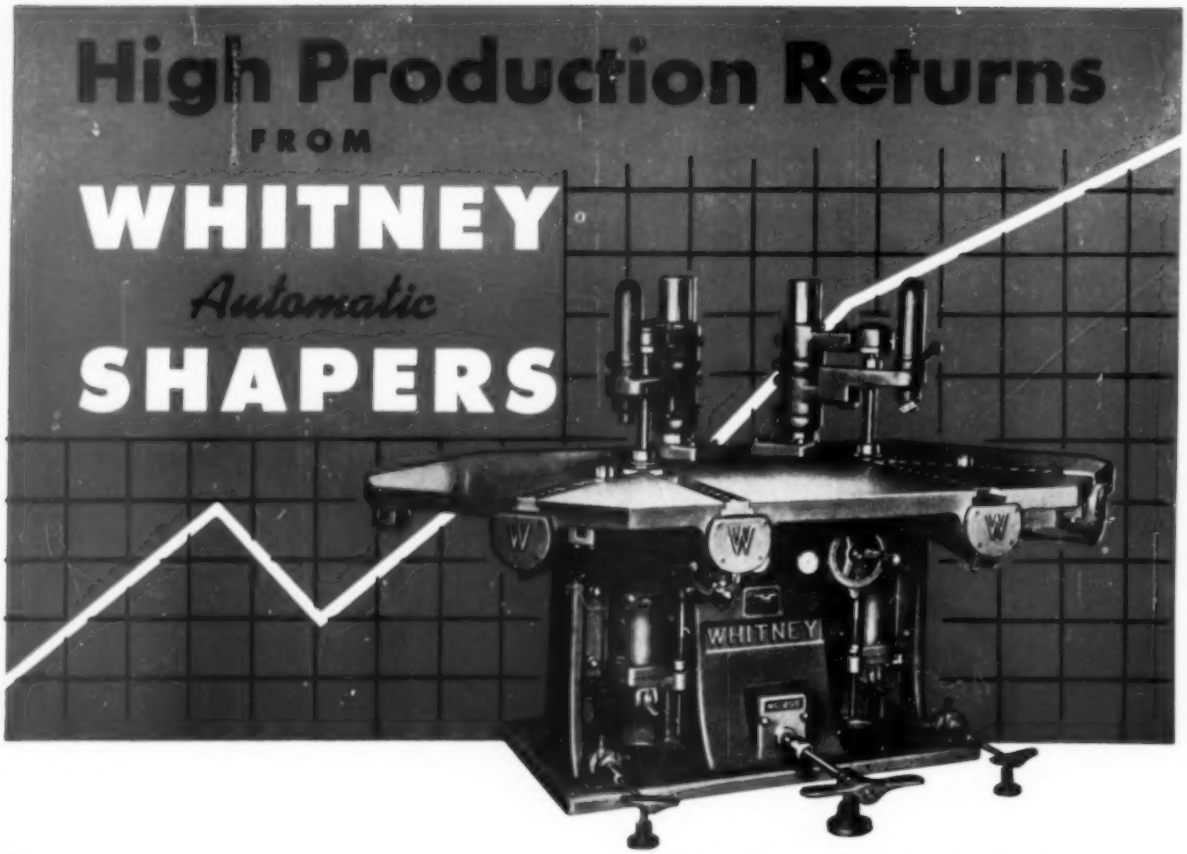
A Vance Publication

FEATURES IN THIS ISSUE

- Wood vs. Competitive Materials
- What's New in Sanding Machines and Methods
- Guarding Profits With Lumber Inventory Control
- One-Man Lumber Core Glue Presses
- Current Prices — Trends — New Products — Letters

WOOD SALUTES
Tom DeWeese

High Production Returns FROM WHITNEY *Automatic* SHAPERS



WHITNEY 295 AUTOMATIC SHAPER
There's a Whitney Shaper for every shaping need. Single, and Double Spindle Models. Direct Motor Driven or with Motors belted to the Spindles.

Because Whitney Automatic Shapers increase production many times over hand shaping and produce smooth, uniform work with minimum labor and handling costs they can prove to be one of the most profitable investments you ever made. Whether you shape panels, tops, built-up assemblies, handles, chair parts, toys or novelties these shapers can bring big returns in quality production and lower costs.

Easy set-ups and quick change-overs make the Whitney Automatic ideal for short or long runs. And remember, Whitney up-to-the-minute design and precision construction mean low maintenance, economical operation and long life, a profitable return on your investment.

Investigate Whitney Automatic Shapers for your important shaping jobs today. Send us samples for our suggestions and cost analysis. No obligation, of course. Ask for shaper bulletin WPI.

For Faster Smoother More Efficient Shaping

In Our 117th Year

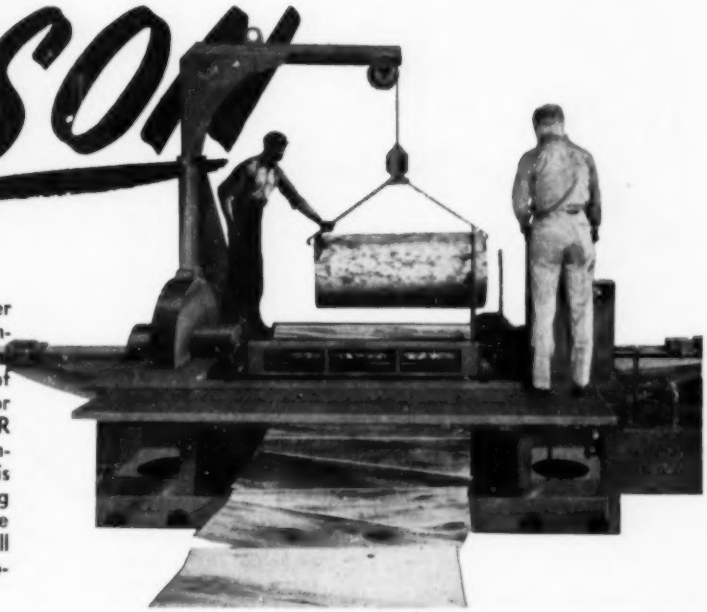
BAXTER D. WHITNEY & SON, Inc.
Quality Built Woodworking Machinery since 1837

PLANERS • SHAPERS • AUTOMATICS • VARIETY SAWS • BACK KNIFE LATHES

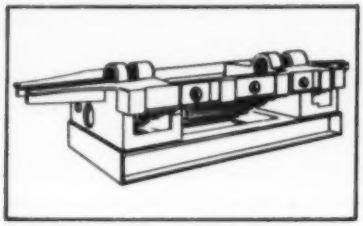
WINCHENDON, MASSACHUSETTS, U. S. A.

Before You Buy any Veneer Lathe

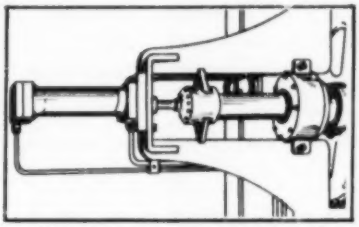
SEE JACKSON



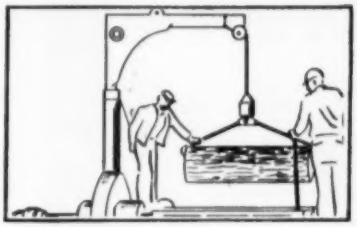
The purchase of any veneer lathe represents a substantial investment . . . before you make that investment examine the many plus features of Jackson All-Steel frame Veneer Lathes. See for yourself how Jackson will actually PAY FOR ITSELF in man hours of labor saved and increased operating efficiency. Illustrated on this page are just a few of the many outstanding features you will find on Jackson . . . many are exclusive. A letter, wire or telephone call will bring a Jackson Engineer to discuss your problems . . . there is no obligation.



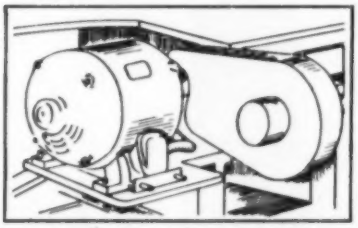
ALL-STEEL FRAME—first with Jackson the All-Steel frame construction permits operation of lathe at maximum speeds without danger of casting failure common to cast iron frames.



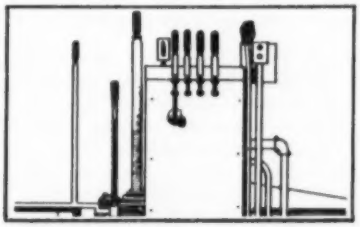
HYDRAULIC CHUCKING—another Jackson first designed for rapid engagement and release of chucks.



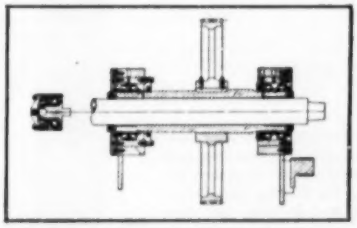
HYDRAULIC HOIST—another first with Jackson, designed for fast positive and efficient operation.



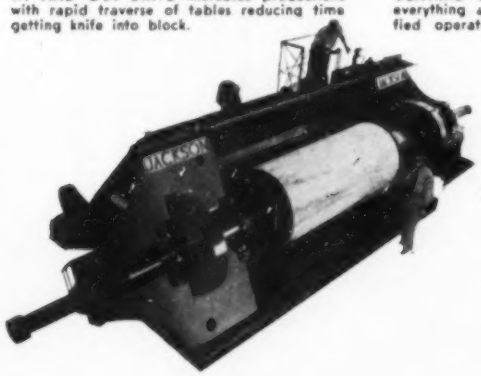
IN AND OUT DRIVE—increases productions with rapid traverse of tables reducing time getting knife into block.



CENTRAL CONTROL PANEL—operator has everything at his fingertips for fast, simplified operation.



TIMKEN BEARING EQUIPPED—the famous Timken Anti-Friction Bearings reduce wear and keep lathe working at peak efficiency. Diagram shows typical spindle mountings.

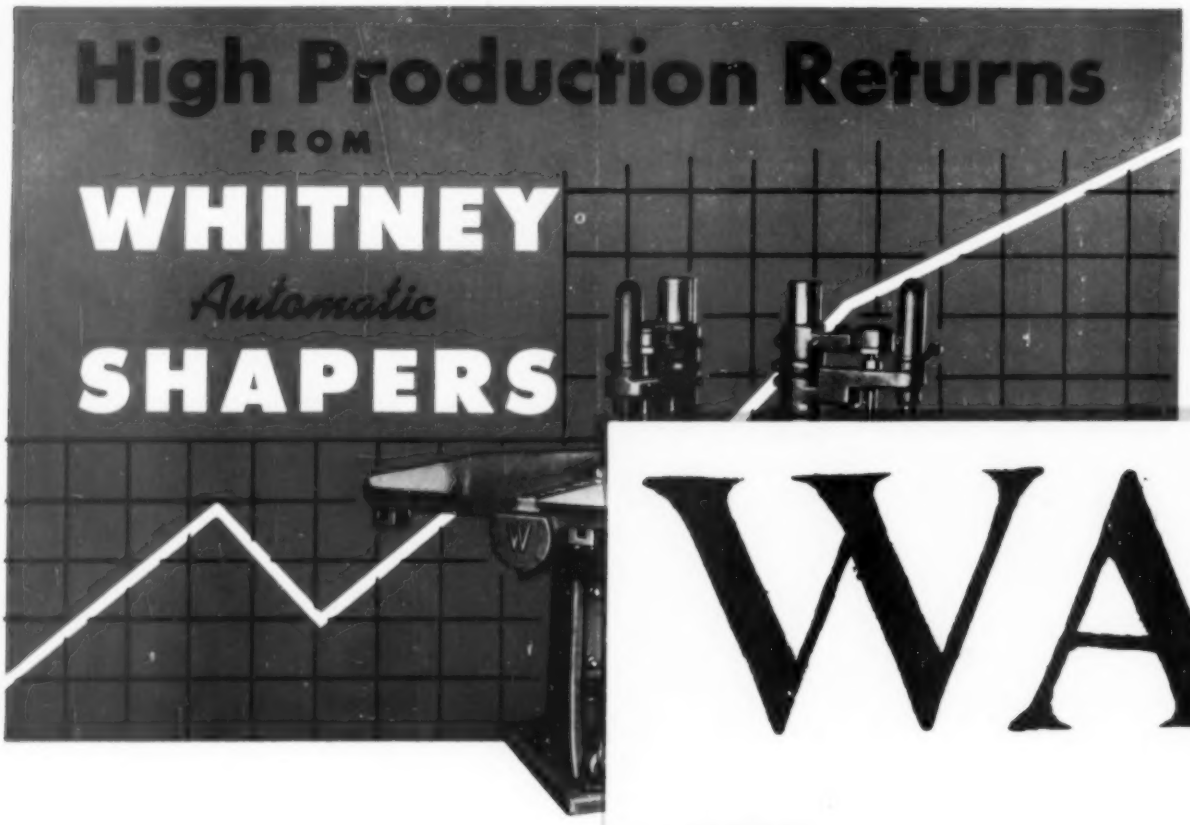


JACKSON INDUSTRIES, INC.

VENEER MACHINES DIVISION

BIRMINGHAM, ALABAMA

High Production Returns FROM WHITNEY *Automatic* SHAPERS



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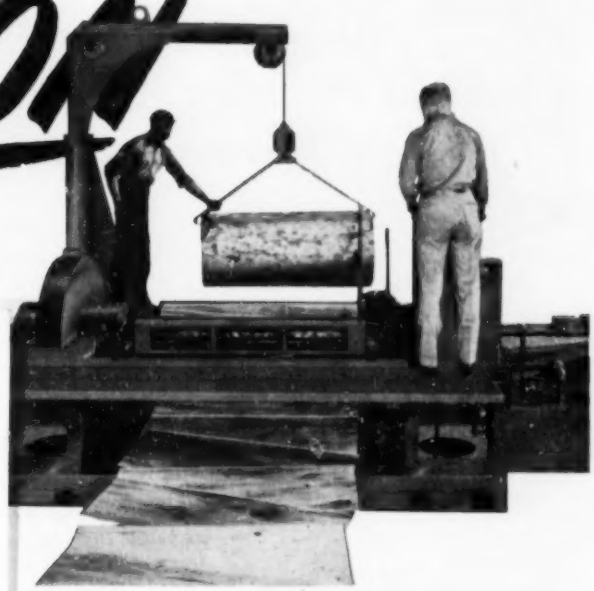

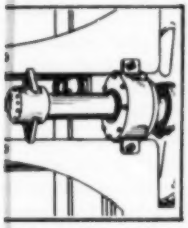

ING—another Jackson
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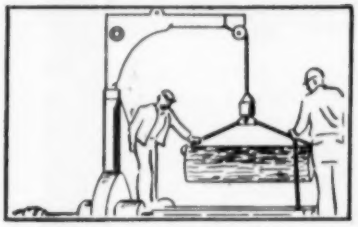

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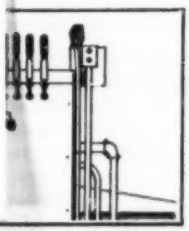

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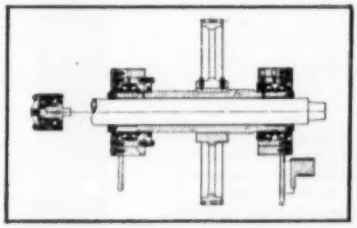

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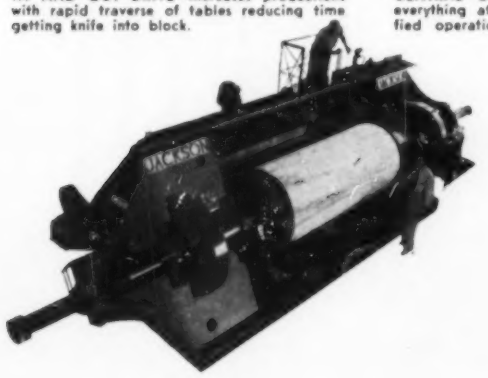


JACKSON INDUSTRIES, INC.

VENEER MACHINES DIVISION

BIRMINGHAM, ALABAMA

world's
largest
maker
of **hardwood floors**

selects
KIRK AND BLUM
dust control

Two of a number of the new, more efficient "Type C" KIRK & BLUM Centrifugal collectors serving this modern woodworking plant.

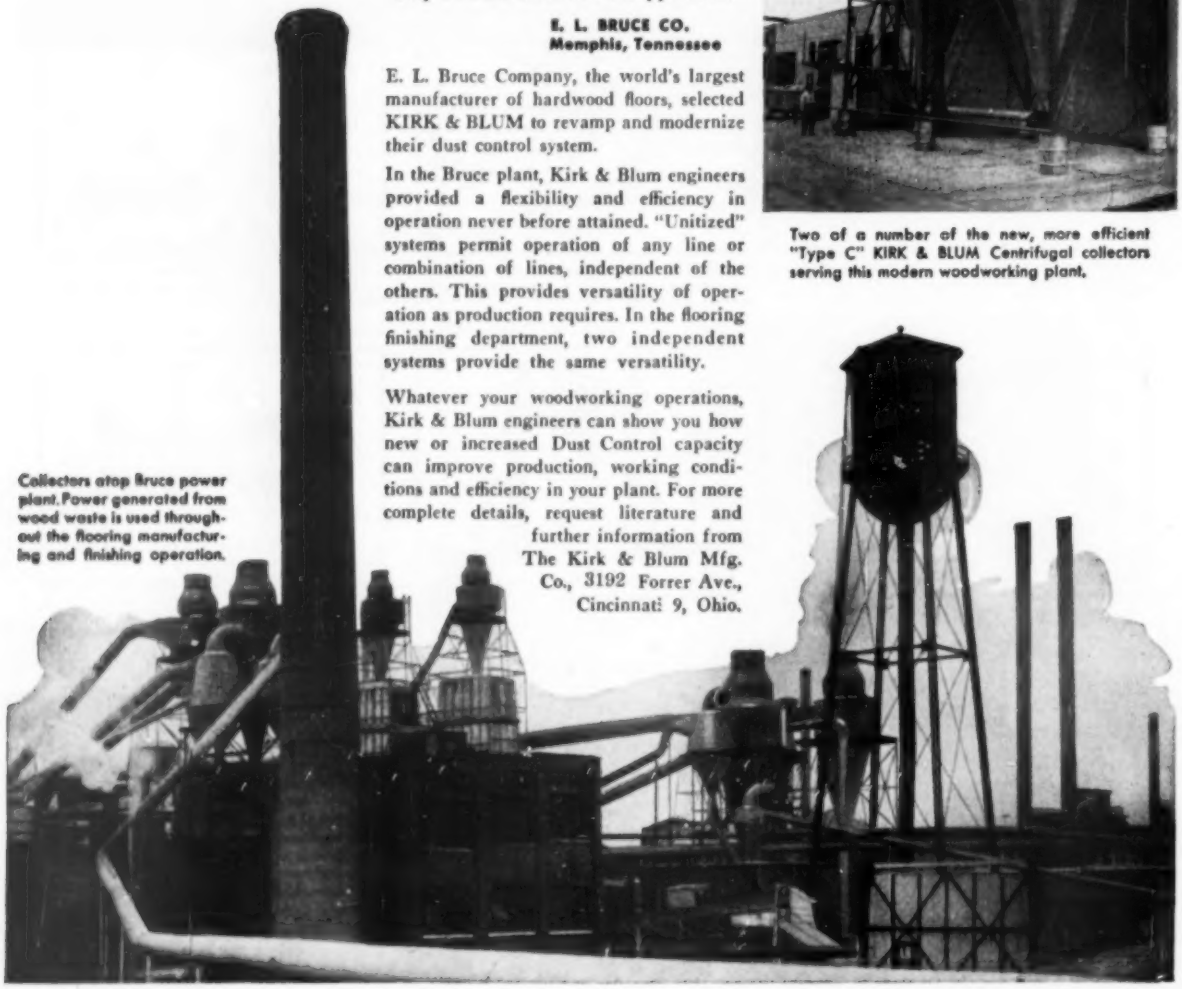
"Our feeling was that you could give us better engineering and workmanship . . . we were not disappointed."

E. L. BRUCE CO.
Memphis, Tennessee

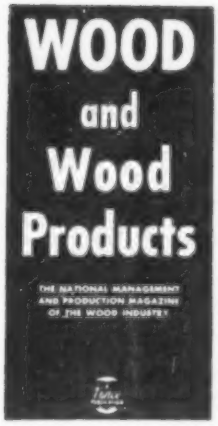
E. L. Bruce Company, the world's largest manufacturer of hardwood floors, selected KIRK & BLUM to revamp and modernize their dust control system.

In the Bruce plant, Kirk & Blum engineers provided a flexibility and efficiency in operation never before attained. "Unitized" systems permit operation of any line or combination of lines, independent of the others. This provides versatility of operation as production requires. In the flooring finishing department, two independent systems provide the same versatility.

Whatever your woodworking operations, Kirk & Blum engineers can show you how new or increased Dust Control capacity can improve production, working conditions and efficiency in your plant. For more complete details, request literature and further information from The Kirk & Blum Mfg. Co., 3192 Forrer Ave., Cincinnati 9, Ohio.



Collectors atop Bruce power plant. Power generated from wood waste is used throughout the flooring manufacturing and finishing operation.



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Los Angeles 57—Bob Wettstein, Granada Bldg., 672 S. Lafayette Park Place, Dunkirk 8-2286.
San Francisco 8—(Bob Wettstein) Jerry Howell, Howard Bldg., 209 Post St., Yukon 6-2522.

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(advertisement)

Mauk Talk

Nothing like a cocktail party for finding out who your friends were.

* * *

We don't care what the fashion experts say. Whether skirts go up or down we'll follow wherever they go.

* * *

Officer, to lady illegally parked: "Lady, can't you read?"

"Why, certainly. The sign says, 'Fine for parking'."

* * *

Ah-ah-ah-ah—don't throw out those good resolutions. Remember, the best is what you want in 1954 and you order it from the Mauk Lumber Co.

Whatever your building needs, MAUK meets them completely. The more specific your order the more satisfactory the response you get from MAUK. Just let us know. We'll do the rest to make 1954 your best.

* * *

Simple Celia knows why gentlemen prefer blondes. They get dirty faster."

* * *

They're saying in Russia, "Vote for Malenkov. The life you save may be your own."

* * *

The ladies were at tea and one said, "By the way, I haven't seen Mrs. Klunk lately."

Another replied, "I hear she's pregnant again." The five year old Mike pipes up, "Can't they find out what's causing it?"

* * *

What with all the chloropnyll, irium and antizyme they're putting in these days there won't be any room left in the tube for toothpaste.

* * *

MAUK Seattle Lumber Co.
Seattle, Washington

* * *

C. A. MAUK Lumber Co.
Toledo, Ohio

Your Specialist in Profitable Woodworking

He's an expert on precision woodworking machinery, but he's always searching for new ways of improving production and holding down maintenance costs. He knows a lot of important people in the woodworking industry, but he's always ready to spend hours helping an operator or maintenance man learn the details of a new machine.

He's your Diehl Representative—YOUR SPECIALIST IN PROFITABLE WOODWORKING — and you'll find him as congenial as he is dependable. If you have a production problem, why not contact him?

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Rowney Machinery Company
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Seattle 4, Washington
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Chicago 5, Illinois

Standard of Comparison in the Woodworking Industry

THE G. M. Diehl MACHINE WORKS, INC.
WABASH, INDIANA • U. S. A.

JANUARY, 1954

WOOD and Wood Products

VOL. 59, NO. 1

INDUSTRY NEWS . . . . . AND TRENDS

LUMBER

Birthrate Hikes Lumber Need

A soaring U. S. birthrate, which statisticians assert will result in a 20% increase of children from 5 to 17 by 1960, heralds renewed activity in school construction and other building, with accompanying wider markets in furniture and other wood products. The beginning of the boom is already being felt from the births recorded in 1946, increased school construction having been a strong factor in the overall 1953 building picture.

Evidence of activity comes in a report by the Maple Flooring Manufacturing Association that sales of "gymnasium grade" flooring tripled during the first eight months of 1953. Northern mills had to go on extra shifts to meet delivery.

Demand for school furniture, currently extending such leading suppliers as American Seating Co., Grand Rapids, Mich., to capacity production, can be expected to hit even brisker paces in succeeding years.

N. American Market Strong

The North American lumber market has, in general, been stronger than usual in recent months, despite regional weaknesses due chiefly to lack of purchasing power, according to C. D. Schultz & Co., Canadian foresters and Engineers. Indications are that behind this activity may lie the vast potential demand for lumber to rebuild war-shattered Korea.

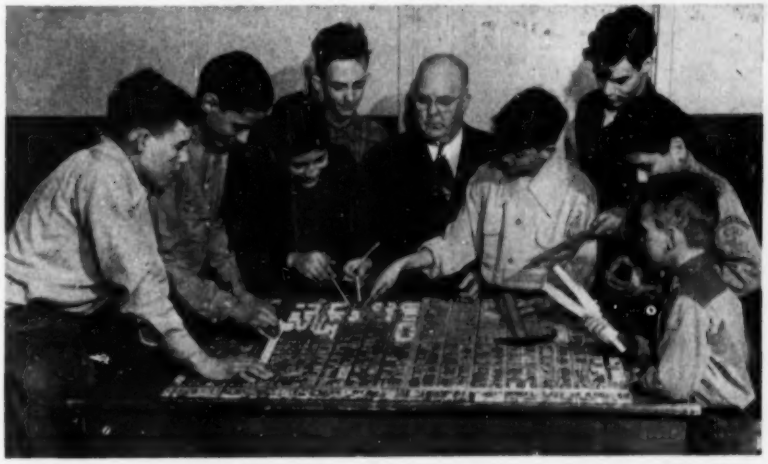
Lifting of controls on the use and importation of softwoods in the United Kingdom is hailed as encouraging, although availability of dollars is still a controlling factor.

Lower Grades Find Big Market

More than 2¼ billion board feet of less expensive lumber was made available in 1953 by West Coast mills to builders at a price approximately $25 per thousand feet below the price of the next higher grade. Estimated saving at $250 per home totaled about $55 million, says H. V. Simpson, executive vice-president of the West Coast Lumbermen's Association.

Designers and thrifty builders are joining with lumbermen in fully utilizing lower grades of lumber. The trend is in keeping with recommendations by the U. S. Forest Products Laboratory, Madison, Wis., on proper use of lower grades of Douglas fir and hemlock. FHA and other federal agencies accept these less expensive grades for a wide variety of uses in home and construction use.

"More complete utilization of our great forest resources," Simpson pointed out, "has become an accomplished fact now that markets have opened up for vast quantities of lower grades of lumber through better marketing and more aggressive selling. Loggers can now find a market for logs once left in the forests."



Wood Scraps, Neatly Sacked as Giveaways, Spread Good Will

These young members of the Old Town Jane Addams Outpost branch of Chicago Boys club explain how they are using Hines Lumber Co. millwork cutoffs to make miniature buildings for the relief map of their community. Walter Johnson, center, is in charge of the free distribution of the sacks of wood scraps to such organizations as this, Boy and Girl Scout troops, Cub Scout packs and Off-the-Street clubs who agree to call for their allotment on an appointed day.

Scraps Win Friends

As kindling wood, the Edward Hines Lumber Co. of Chicago couldn't give away the large quantity of cutoffs accumulating at its millwork division. Even classified ads offering the material free to anyone who would haul it were of no avail. But neatly packed in clean, white cotton bags, this scrap took on a cinderella glamour which has made it a sought after material.

"Customers" are Boys clubs, Boy and Girl Scout troops, Cub Scout packs and Off-the-Street clubs who take their turn on a three week long waiting list for the privilege of picking up their requested allotment at the main yard. In this way valueless wood scrap is winning friends for Hines, keeping young citizens busy at worthwhile projects. Hundreds of testimonial and thank-you letters bear witness to the community relations value received.

All lumber remanufacturing plants

develop appreciable amounts of cutoffs, even though they might reclaim a large percentage by running it through the Lindermann jointer and gluing it into panels for use as cabinet ends and backs. Perhaps this community relations gesture would serve a useful purpose at your plant.

Lumber Shipments, Orders Up

Lumber shipments of 501 mills reporting to the National Lumber Trade Barometer were 2.6% above production for the week ending November 28. In the same week new orders were 2% above production. Unfilled orders of the reporting mills amounted to 30% of stocks. For the reporting softwood mills unfilled orders were equivalent to 19 days' production at current rate, and gross stocks were equivalent to 61 days' production.

For the year to date, shipments of reporting identical mills were 2% above production; new orders were 1% above production.

Loan Banks Eye Mortgage Cash

Savings and loan associations, dedicated to financing the housing industry, are making a bid for 60% of this segment of the national mortgage market, according to Ben H. Hazen, Portland, Ore. past president of the U. S. Savings and Loan League.

Speaking before the league's 61st annual convention Nov. 20 in Chicago, he made a plea for a greater share of this market as a means of assuring the construction industry greater stability and freedom from uncertainty.

Hazen contends that attraction of more money into the home construction field will spread benefits to everyone who derives his income from related fields as well. The league foresees adequate mortgage funds for 1954 at no increase in interest rates, in some cases lower rates

Atomic Energy Uses Told

Representatives of lumber and wood using industries were among those attending the first conference on industrial uses of atomic energy to be sponsored by a state agency, the New York State Department of Commerce, Nov. 19 at Buffalo, N. Y. Purpose of the conference was to furnish a better understanding of the actualities and potentialities of atomic energy peacetime uses.

FURNITURE

October Shipments Off, Year High

Furniture shipments for 1953 promise to top the 1952 totals, based on a 5% better record reported for the first ten months of the year. Bookings were 1% ahead over the same period.

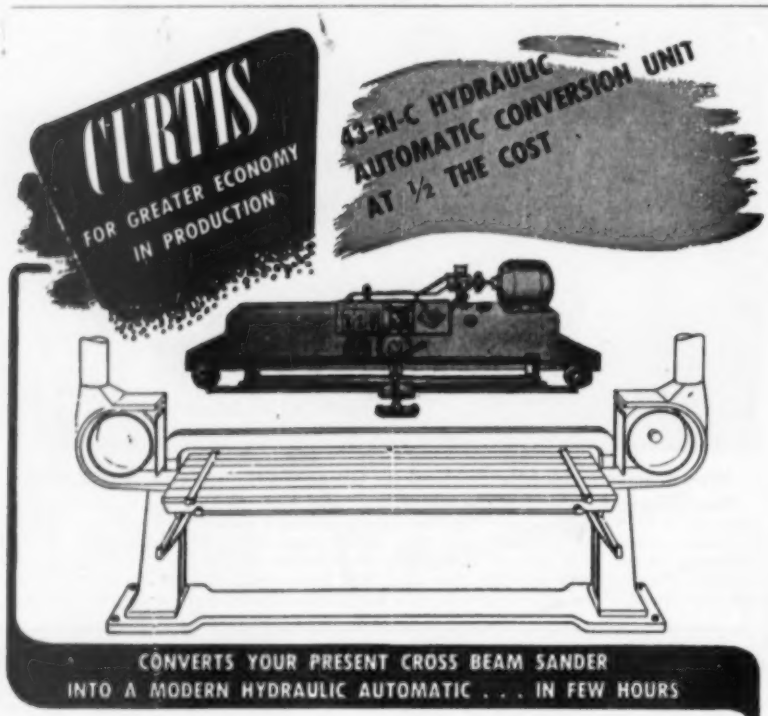
Seidman and Seidman reported, however, that October was the third month in a row for sales and shipments to slide off the previous high levels. "The decline in October, compared with the like month last year, however, must be viewed in light of the fact that October, 1952, was the biggest month ever known to the industry," the report stated.

Orders booked in October were down 10% from September and 19% from October, 1952. Shipments, usually higher in October than September, were off 2%. Cancellations for October were 10% of the amount of orders booked, higher than normal.

Fundamental Designs Will Be Featured at Winter Market

A return to fundamentals in designs and in selling plans is the objective of the 1,250 manufacturers and 25,000 buyers who will attend the 1954 winter furniture market Jan. 4-15 at the American Furniture Mart, Chicago.

Much of the new merchandise will be the result of a consumer revolt against furnishings described as an insult to the human anatomy. Chairs



CONVERTS YOUR PRESENT CROSS BEAM SANDER
INTO A MODERN HYDRAULIC AUTOMATIC . . . IN FEW HOURS

Would you like to step up production as much as 200%? . . . and do so at half the price of a new complete machine without adding to your labor costs? It can be done . . . in fact, it's being done by many plants equipped with the Curtis Hydraulic Automatic Conversion Units! Added to your present equipment, the Curtis will transform your type 8V stroke sander into a modern, high speed, precision, hydraulic automatic machine Your own men can easily make the conversion. The Curtis unit is compact, self contained and complete r e a d y for mounting on the cross beam of your present sander. Length and speed adjustments can be made while the machine is in operation. Investigate the Curtis unit now . . and you'll learn how easily your sanding operations can be done faster, better and more economically Send today for full details . . no obligation at all.

Write for new literature on:

CURTIS HYDRAULIC "AUTOMATIC CONVERSION UNIT"

CURTIS MACHINE CORPORATION

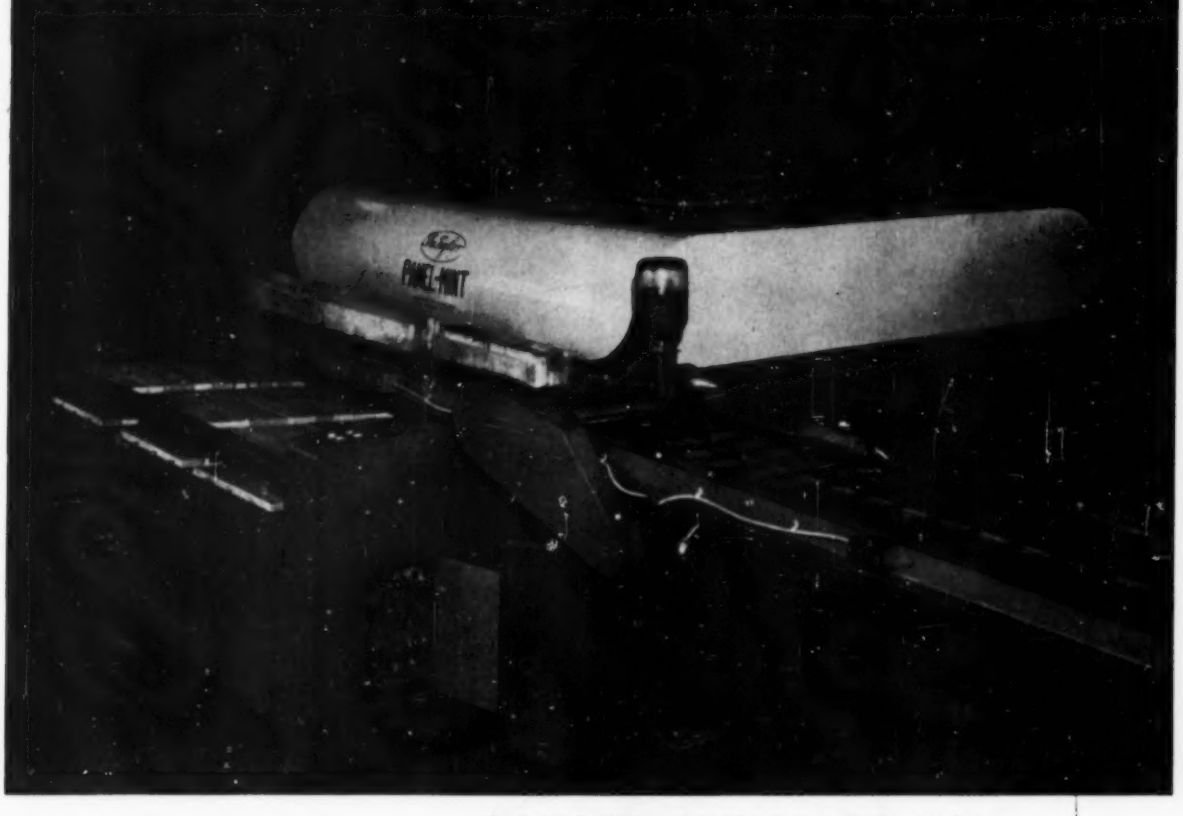
1300 East Second St. Jamestown, N.Y.

PRECISION BUILT SANDERS, POLISHERS and GRINDERS SINCE 1897

Thanks to the Taylor Panel-Mint —

A Leading Manufacturer Reports

EDGE GLUING TIME REDUCED FROM 104 TO 27 MAN-HOURS PER WEEK WITH NO GLUE FAILURES!



The Taylor Panel-Mint, equipped with an automatic, reversing, conveyor-type glue applicator, which can be loaded and unloaded from the same operating station as the Panel-Mint itself.

Prior to installing the Taylor Panel-Mint Steam-heated, Hydraulic, Automatic Batch Press a year ago — a leading manufacturer required 2 men, working 5½ days per week, to glue the same amount of stock now being produced by 1 man working only 3 days per week. This manufacturer, using the Panel-Mint for the resin gluing of Birch, Walnut, Mahogany, White Oak, Willow and Cherry, obtains perfectly flat panels — with no glue failures! Uniform high quality of glued joints is made possible through absolute control of both temperature and pressure. May we suggest that you, too, learn the benefits which may be attained in the one-man Taylor Panel-Mint Batch Press by thermal-curing with resin glue—automatically, under uniformly controlled standards? Your inquiry will receive our prompt attention.

JAMES L. TAYLOR MANUFACTURING CO.

Edge Gluing Specialists Since 1900

116 PARKER AVENUE • POUGHKEEPSIE, N. Y.

have backs, sides and legs, and tables are once more tables. This does not mean an abandonment of modern styling, however, for a recent survey showed 60 to 65% of sales were in contemporary design. Comfort minus extremes is the trend.

In addition to face-to-face salesmanship, every advertising and promotional plan that worked in the past will be brought into play at the 1954 market. Guiding thought is that merchants are not merely laying in inventory—they are manufacturing sales for the "hard-sell" period ahead.

The woods best liked in bedroom and dining room furniture continue to be mahogany, oak, walnut and the Phillippine hardwoods, so far as materials with veneer figure are concerned. Gum, oak and birch are strong in the solid wood field, along with maple. While there is much talk of cherry, hardwood producers say that —even though it has quadrupled its market in the past three years—its sale amounts to only 5% of mahogany.

Imported hardwoods have cut in on domestic furniture woods to some extent, and the use of photographic finishes, laminated plastics, etc., bears watching. The Federal Trade Commission had been holding hearings in the television-radio fields on wood designations, and there is the feeling that if stronger regulations are required in a sister field it will soon extend to furniture.

Of all fields in wood case pieces, probably the greatest post-war strides have been made in the unfinished furniture field. Most of this is in pine, coming from the West Coast. It is finished by the consumer in either modern or provincial feeling, and has met with strong success. Better-styled merchandise has moved well in the medium-price bracket, but the bulk of sales are reported in the popular price levels.

Merchandise for the lollipop set enjoyed a year slightly ahead of the rest of the furniture industry—which promised to end up one of the best on record for many concerns.

for a fabulous finish...
Jewel Brand
ABRASIVE BELTS
In a wide range of grits and widths for sanding, smoothing, polishing all types of wood products.
ABRASIVE PRODUCTS, INC.
553 Pearl Street
South Braintree 85
Massachusetts

EDUCATION

Seniors Vie for FPRS Cash

An award of $250, sponsored by the Heywood-Wakefield Co., Gardner, Mass., will constitute first prize in the 1954 competition to select the outstanding New England States college senior whose studies are in the field of interest of the Forest Products Research Society.

A second prize of $100 is being sponsored by the Northeast Section which inaugurated the competition in 1952 with the objective of attracting the best men possible to the field of forest products. Award winners will be announced at the Northeast Section, FPRS spring meeting scheduled for April 29-30 at Williamsport, Pa.

COMING EVENTS

Jan. 22: Wood-Turners Service Bureau, annual meeting, Hotel Statler, Boston.

Jan. 25-28: Plant Maintenance & Engineering Show and Conference, International Amphitheatre and Hotel Conrad Hilton, Chicago.

Jan. 29: Fifty-sixth Annual Meeting, Indiana Hardwood Lumbermen's Association, Hotel Severin, Indianapolis.

Feb. 2: Pacific Northwest Section Meeting, FPRS, Portland, Ore.

Feb. 10: Pacific Southwest Section Meeting, FPRS, Los Angeles, Calif.

March 4-5: Eastern Canadian Section Meeting, FPRS, Chateau Laurior, Ottawa, Canada.

May 5-7: National Meeting, FPRS, and Woodworkers Industry Show, Grand Rapids, Mich.

May 21-22: Redwood Region Logging Conference, Ukiah, Calif.

Not when you use KIMPAK* 301!

New KIMPAK 301 is the practical solution to surface damage to furniture finishes during shipment. KIMPAK 301's ability to shield the fine finish against scratching makes it the ideal protective agent in a furniture package. KIMPAK 301 costs no more than ordinary materials. It is specially designed to protect against the major causes of scratching:

1. Abrasiveness of the inner spacers. KIMPAK 301 provides a scratch-free, non-disintegrating, compressible barrier between inner spacers and the furniture finish. Its conformability ensures a snug package.

2. Dust, dirt, cinders that sift into the container. The combination of high creping and porous structure—exclusive with KIMPAK 301—provides a trap for dirt, grit or cinders, which may lodge between the packaging material and the polished surface.

3. Abrasive action of harsh packaging materials. KIMPAK 301 is soft and non-abrasive . . . free from wood splinters, dirt and other abrasive materials. No lumps, hard glue spots or stiff wrinkles.

Scratching is but *one* of many problems encountered in furniture packaging. These problems are *solved* when new KIMPAK 301 is specified. For more details, contact your local KIMPAK distributor, or mail coupon below.

SPECIFY KIMPAK 301 TO SOLVE THESE INTERIOR PACKAGING PROBLEMS:

- Scratching
- Pressure-marking
- Staining
- Chafing
- Conformability
- Ease of handling
- Disintegration

Whatever your protective interior packaging requirements, there is a Kimpak specification that does the job... better!

KIMPAK INTERIOR PACKAGING
*T. M. REG. U. S. & FOREIGN COUNTRIES

A Product of Kimberly-Clark

KIMBERLY-CLARK CORPORATION Dept. WW-14
Neenah, Wisconsin

We would like to learn how new KIMPAK 301 can provide better protection at lower cost for our products. Please send complete information.

Name .....

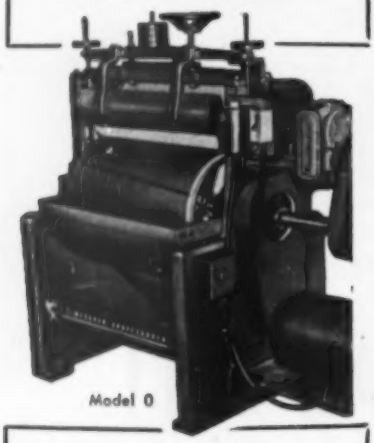
Firm .....

Street Address .....

City ..... *Zone* ..... *State* .....

NEW!

OSCILLATING DRUM
SANDER
with
"MAGIC TOUCH"
FEED ROLL



Model 0

THE TIMESAVER
SHAPESANDER
unexcelled for
production sanding
on all types of
STRAIGHT
CURVED and
SERPENTINE
WOOD STOCK

The new feed roll feeds work over the oscillating drum in a straight line at a constant rate of speed producing very fine sanded finishes using paper as fine as 5-0.
The SHAPESANDER will sand hard or soft woods, veneer or solid cabinet doors and other fabricated wood parts. It will not sand thru veneer on panels even if cores are defective.
The use of the SHAPESANDER eliminates hand sanding with users reporting as much as 80% saving in production time. Actual production runs on the SHAPESANDER indicate absolutely no dubbing either on the infeed or outfeed on very thin veneer or solid pieces.
The SHAPESANDER is highly versatile and can be used for unlimited types of sanding operations. Investigate the advantages of the SHAPESANDER for your shop now!

WRITE TODAY
FOR CIRCULAR

TIMESAVERS, INC.
P. O. BOX 1
ROBBINSDALE 22, MINN.

LETTERS to the EDITOR

New Chipboard Unit Hot Item

Editor, WOOD & WOOD PRODUCTS:

In your December issue you had an article on "New Chipboard Unit at Berkline." The machine referred to was developed by the Chipcraft Co. and we would appreciate it if you would let us have the address of the company, as we would like to get in touch with them in regard to one of these machines.

—T. F. F. Co., N. Y.

Editor, WOOD & WOOD PRODUCTS:

I am writing to obtain information on the new Chipboard unit described in the December issue of your magazine on Page 24. We are actively interested in descriptive literature on this machine; therefore, I hope you will be able to send the manufacturer's address by return mail.

Our company reads WOOD & WOOD PRODUCTS with interest and finds articles such as this applicable to our operations.

—P. B. Co., Calif.

Editor, WOOD & WOOD PRODUCTS:

The December 1953 issue of WOOD & WOOD PRODUCTS, Page 24, gives information on a "Chipboard Unit" which was described. We are interested in obtaining further information from the licensed distributors of the machine.

—C. M. L. & Co., Wash.

Foremen in Management

Editor, WOOD & WOOD PRODUCTS:

Your November issue carried an article, "Is your Foreman on the Management Team?" We would like to receive three copies of this complete article.

—C. B. & L. Co., Tenn.

Favors Wood Advertising

Editor, WOOD & WOOD PRODUCTS:

Your editorial on Page 19 (November, 1953) points out very clearly the need for an intelligent MARKETING program designed to acquaint the buying public with the superior qualities of wood and wood products.

Our company spends many thousand dollars in trade association dues and subscriptions to trade extension and research. I believe that if somehow, someway, a national advertising program could be set up with the cost borne by not only lumber manufacturers but by the various segments of the wood using and fabricating industries, ultimately wood and wood products would gain their rightful place in the mind and affection of the buying public.

—F. Edwin Mower, Pres.
Mower Lumber Co., W. Va.

Casting Resins and Wood Waste

Editor, WOOD & WOOD PRODUCTS:

We were much interested in the special article on the salvaging of wood waste with phenolic resins in one of your issues (August, 1953). May we receive further information regarding the names of manufacturers of the resins and machinery used?

We regret that our subscription has lapsed and would appreciate information as to how it could be renewed.

—E. E. Co., Canada

India Wants U.S. Lumber

Editor, WOOD & WOOD PRODUCTS:

We shall be very much obliged if you will kindly suggest to us the names and addresses of any reliable wood and timber exporters at your end who are interested in the large-scale export of hardwood and softwood timber to our country.

—Rasiklal Mohanlal & Co.
123, Mahatma Gandhi Road
Bombay 1, India

Horizontal Boring Machine

Editor, WOOD & WOOD PRODUCTS:

Can you tell us if anyone has a horizontal boring machine that can bore holes from 4 to 8 ft. in depth in various diameters?

—L. W. & M. Co., Calif.

Wood Floors in New Houses

Editor, WOOD & WOOD PRODUCTS:

The article on housing trends in your September, 1952, issue contains statements as to the average square feet of floor area and percentage of wool floors in new housing. If it is possible, I would like to know your source for that information and if the values for wood floors included those surfaces covered with tile and linoleum.

—G. D. P., Mich.

NOW Available from STOCK:

AT MEMPHIS

Plywood press, side loading, 99" x 51", 10 openings, 170 PSI, 2¾" daylight.

Plywood press, side loading, 100" x 66", 5 openings, 200 PSI, 3" daylight.

AT KREFELD, GERMANY

2 Plywood presses, end loading, 102" x 67", 12 openings, 327 PSI, 2¾" daylight.

2 Plywood presses, side loading, 102" x 67", 12 openings, 327 PSI, 2¾" daylight.

2 Plywood presses, side loading, 102" x 67", 10 openings, 327 PSI, 2¾" daylight.

2 Plywood presses, side loading, 102" x 51", 12 openings, 327 PSI, 2¾" daylight.

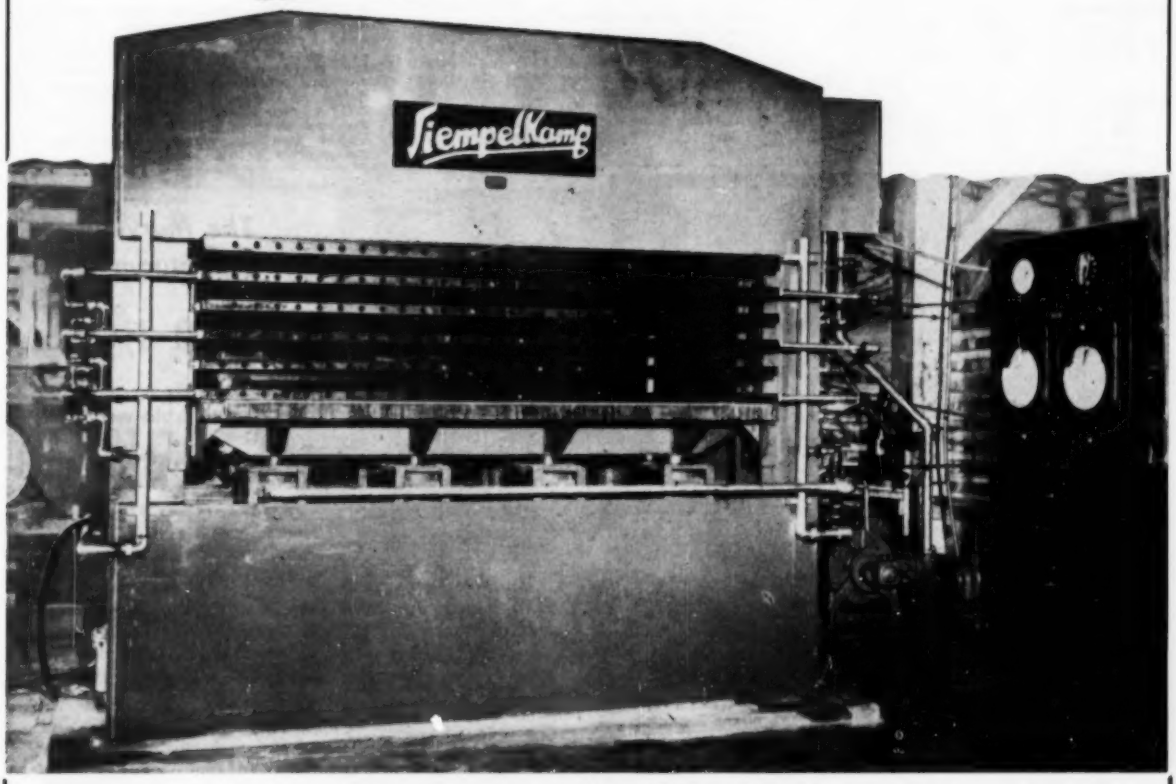
2 Plywood presses, side loading, 102" x 51", 10 openings, 327 PSI, 2¾".

Plywood press, end loading, 102" x 51", 15 openings, 327 PSI, 2¾" daylight.

2 Plywood presses, side loading, 104" x 53", 12 openings, 327 PSI, 3" daylight.

5 Plywood presses, side loading, 106" x 54", 22 openings, 250 PSI, 3" daylight.

Siempelkamp Presses



Here is recently-installed 100" x 66" press

WILCO **ilco** Machine Works

1301 North Hollywood St.
Memphis 8, Tenn.
Tel. 4-1188

Or West of the Rockies:

HEYER Sales & Engineering Co.

1004 Washington Bldg.—Tacoma 2, Wash.
Phones Tacoma BR 1605 — Seattle LOgan 0921

CURRENT LUMBER PRICES

These prices are made available by George Land, publisher of the weekly *Hardwood Market Report*, in his copyrighted issue of December 5, 1953. For the entire list, contact Mr. Land, Box 5716, Memphis 4, Tenn.

Note: Each price change from preceding issue is marked by an asterisk (*).

SOUTHERN HARDWOODS

F.O.B. mills—Texas and Louisiana area. Estimate of present mill point average market price, to consuming trade on band-sawn Southern Hardwoods in carload quantities, random widths and lengths, rough air dried and graded in accordance with NHLA rules on inspection. Prices in dollars per M ft. On straight cars of upper bracket grades premiums are frequently being paid.

ASH—FIRM TEXTURE	FAS	No. 1C	No. 2C
4/4-in.	160	120	63
6/4-in.	170	125	67
8/4-in.	190	150	80

BASSWOOD			
4/4-in.	160	126	83
6/4-in.	170	135	87
8/4-in.	180	145	90

BEECH			
4/4-in.	125	100	55
6/4-in.	140	110	60
8/4-in.	167	127	72

CHERRY	FAS	No. 1C	No. 2C
4/4-in.	220	150	90
6/4-in.	240	170	95
8/4-in.	250	180	100

RED GUM—PLAIN			
4/4-in.	205	150	75
6/4-in.	230	170	75

RED GUM—QUARTERED			
4/4-in.	220	165	75
6/4-in.	250	190	90
8/4-in.	260	200	95

SAP GUM—PLAIN			
4/4-in.	125*	105*	52*
6/4-in.	128	118	55
8/4-in.	155	130	

HACKBERRY			
4/4-in.	117	97	67
6/4-in.	132	112	75
8/4-in.	135	113	75

SOFT MAPLE—WHAD			
4/4-in.	130	110	67
6/4-in.	145	120	77
8/4-in.	155	125	80

SOFT MAPLE—WHND			
4/4-in.	115	90	60
6/4-in.	130	105	75
8/4-in.	135	110	80

RED OAK—PLAIN			
4/4-in.	175	100	72
6/4-in.	190	130	
8/4-in.	200	140	

WHITE OAK—PLAIN			
4/4-in.	185	110*	72
6/4-in.	200	140	
8/4-in.	205	145	

PECAN			
4/4-in.	112	92	50
6/4-in.	130	110	60
8/4-in.	155	130	65

POPLAR—PLAIN	FAS	S&S	No. 1C
4/4-in.	170	160	130
6/4-in.	185	175	140
8/4-in.	205	195	150

SYCAMORE—PLAIN	FAS	No. 1C	No. 2C
4/4-in.	115	95	60
6/4-in.	127	107	62

TUPELO—PLAIN			
TUF TEXTURE—DEEP SWAMP			
4/4-in.	125*	105*	52*
6/4-in.	138	118	55
8/4-in.	155	130	

WILLOW			
4/4-in.	135	115	60
6/4-in.	142	122	67
8/4-in.	150	125	70

APPALACHIAN HARDWOODS

F.O.B. mills—Johnson City, Tennessee area. Estimate of present mill point average market prices on sales to consuming trade on band-sawn Appalachian Hardwoods in carload quantities, random widths and lengths, rough air dried and graded in accordance with NHLA rules on inspection. Prices in dollars per M ft. On straight cars upper bracket grades premiums are frequently being paid.

NEW! IMPROVED STIX

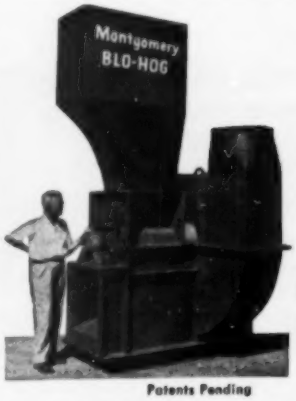
FOR CEMENTING

- CONSOWELD
- FORMICA
- RESILYTE
- FORMICA
- TEXTOLITE
- PANELYTE
- LAMINEER
- V-BOARD
- PARAPLEX
- PLASTILITE
- FARLITE

...THE ONLY CEMENT WITH THE LONGTIME SHELF LIFE GUARANTEE

NEW STIX Does Not Thicken With Age. STIX Needs No Clamps, Presses or Heat.

ADHESIVE PRODUCTS CORP.
1660 BOONE AVE NEW YORK 60 N Y



Patents Pending

The Marvelous Montgomery

BLO-HOG

(The only all-purpose hog in the world)

Eats Up Everything!

. . . including Pine, Oak, Gum, Hickory, Elm, Wet Veneer, Round-up and Sandy Bark. Conveyor-fed—no attendant required. Positively protected from major damage by tramp steel. All connections locked — nothing to shake loose. Maintenance costs unbelievably low.

". . . Dear Mr. Montgomery: It is an unbelievable machine and it is still hard to believe that it is actually handling the enormous volume of scrap we are feeding into it. We operate the hog without an attendant—which means a considerable saving.—J. B. Black, Plant Superintendent, Ocala Manufacturing, Ice and Packing Co., Ocala, Fla."

C. I. T. Terms Available

Write for bulletin and details

JACKSONVILLE BLOW PIPE CO.

P. O. Box 3687
Jacksonville, Florida

TOUGH ASH

	FAS	FIF	No. 1C	No. 2C
4/4-in.	170	160	115	68
6/4-in.	190	180	130	75
8/4-in.	200	190	150	85

BASSWOOD

				No. 2A
4/4-in.	180	170	130	88
6/4-in.	190	180	137	90
8/4-in.	195	185	147	96

BEECH

				No. 2C
4/4-in.	145	135	110	65
6/4-in.	160	150	120	75
8/4-in.	170	160	130	80

BIRCH

4/4-in.	265	255	150	80
6/4-in.	275	265	160	85
8/4-in.	280	270	165	90

BUCKEYE

4/4-in.	135	125	100	65
6/4-in.	165	155	120	72
8/4-in.	170	160	135	78

CHERRY

4/4-in.	230	220	150	90
6/4-in.	250	240	170	95
8/4-in.	260	250	180	100

CHESTNUT

	FAS	No. 1C	FAS WHND	1C & B WHND
4/4-in.	170	120	137	127
6/4-in.	175	125	142	132
8/4-in.	180	130	152	142

HICKORY

	FAS	FIF	No. 1C	No. 2C
4/4-in.	125	115	78	53
6/4-in.	145	135	86	58
8/4-in.	170	160	90	60

HARD MAPLE

4/4-in.	205	195	135	80
6/4-in.	220	210	155	84
8/4-in.	225	215	160	90

SOFT MAPLE

4/4-in.	165	155	115	67
6/4-in.	175	165	135	69
8/4-in.	180	170	140	75

RED OAK—PLAIN

4/4-in.	185	175	120
6/4-in.	200	190	140
8/4-in.	215	205	145

WHITE OAK—PLAIN

4/4-in.	200	190	135
6/4-in.	220	210	145
8/4-in.	225	215	155

WHITE OAK—WHND

	FAS	FIF	C & B	No. 1C
4/4-in.	125	115	95	90
6/4-in.	150	140	120	115
8/4-in.	160	150	130	120

YELLOW POPLAR

	FAS	FIF	No. 1C	No. 2A
4/4-in.	210	200	138	88
6/4-in.	220	210	150	92
8/4-in.	225	215	155	95

POPLAR SQUARES

	FAS	No. 1C & SD
4x4-in.	245	175
6x6-in.	280	190
8x8-in.	340	240

WALNUT—STEAM TREATED

	FAS 6"&up	FIF 6"&up	No. 1C	No. 2C
4/4-in.	270	225	150	75
6/4-in.	295	250	215	90
8/4-in.	420	375	225	95

Walnut list reflects average fob mill, all areas. Basing point not generally observed.

NORTHERN HARDWOODS

Estimate of present f.o.b. Wausau, Wisconsin mill point average market prices to consuming trade on band-sawn Northern Hardwoods in carload quantities, random widths and lengths, rough air dried and graded in accordance with NHLA rules on inspection. Prices in dollars per M ft. On straight cars of upper bracket grades premiums are frequently being paid.

BROWN ASH

	FAS	No. 1C	No. 2C
4/4-in.	155	107	75
6/4-in.	165	122	85
8/4-in.	170	133	90

BASSWOOD

4/4-in.	191	131	89
6/4-in.	201	141	99
8/4-in.	206	151	98

BEECH

4/4-in.	145	100	68
6/4-in.	160	115	78
8/4-in.	165	120	80

BIRCH

4/4-in.	296	151	81
6/4-in.	306	166	91
8/4-in.	311	181	100

ROCK ELM

4/4-in.	150	130	66
6/4-in.	160	140	76
8/4-in.	165	150	81

SOFT ELM

4/4-in.	140	120	72
6/4-in.	150	130	82
8/4-in.	155	138	87

HARD MAPLE

4/4-in.	196	131	78
6/4-in.	206	141	81
8/4-in.	216	151	83

SOFT MAPLE

4/4-in.	160	125	75
6/4-in.	175	135	85
8/4-in.	190	145	93

RED OAK

4/4-in.	186	126	78
6/4-in.	196	146	83
8/4-in.	206	156	86

The OAKLEY SANDER

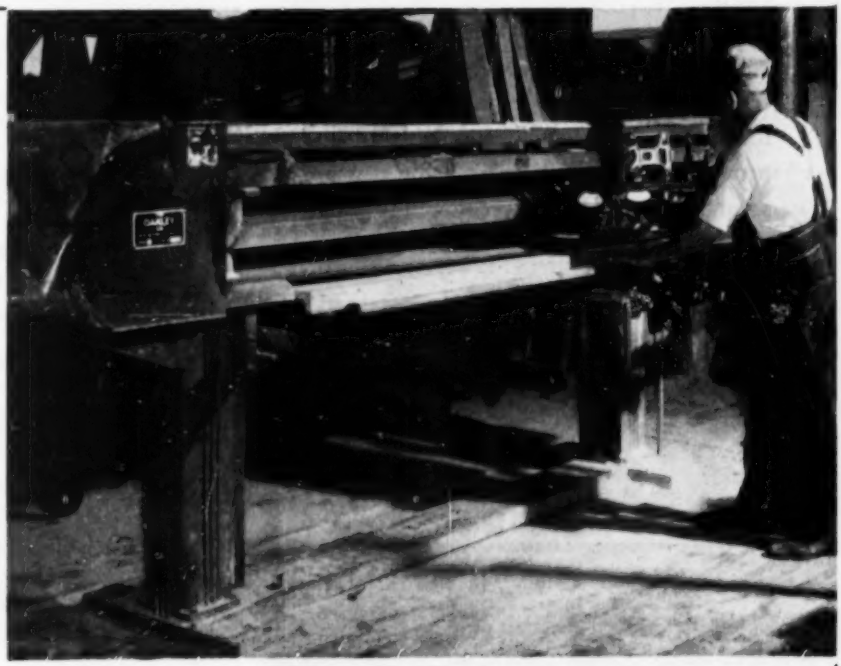
for highest efficiency

•

HIGH SPEED
SEMI-AUTOMATIC
REVERSIBLE

•

The Peak of Perfection



Oakley Model D High-Speed Single

For details write:

THE OAKLEY COMPANY, INC.

FIFTH STREET • BRISTOL, TENN.

These Days A Fellow Has To Do Twice As Much...

EVERY day sees wood used in some NEW way . . . for some NEW purpose in world progress. Many NEW buying and selling methods are being continually set up. So Pamudo makes it a job to follow market changes with NEW and proper methods of supplying the demand accurately, quickly and economically.

Fir Plywood and Lumber Products Through Warehouses and Direct Cars from Tacoma

Sales Agents, Hardel Plywood Co., Olympia, Wash.

Pamudo

PACIFIC MUTUAL DOOR CO.

Direct Shipments

General Office, Rust Building, Tacoma 2, Washington

WAREHOUSE STOCKS
Plywood • Doors • Mouldings
Stock Millwork

FROM TACOMA:
Straight and Mixed Cars • Lumber and Lumber Products • Cut Stock • Mouldings
Fir Plywood • Cut-to-size Industrial Plywood

WAREHOUSES IN 5 PRINCIPAL CITIES
• ST. PAUL 4, MINNESOTA • CHICAGO 38, ILLINOIS
• KANSAS CITY 3, KANSAS • BALTIMORE 31, MARYLAND
• ELIZABETH, NEW JERSEY

WOOD PUZZLERS

This department is designed to help find answers to your production and sales problems. Let us know what information you need. Experience has shown that other readers may be able to help you.

127–Wood Rolls

We are in need of some 4 in. and 6 in. diameter wood rolls to be used to load heavy machinery. We would like the name of a vendor who could supply these rolls. (Mass.)

128–Unfinished Plywood Trays, Plates

We are seeking unfinished plywood trays and plates so that we can decorate them with local flower designs. We sell to jobbers in the gift and souvenir shop trade. Can you furnish names and addresses of such manufacturers? (Ark.)

129–Rock Maple Turnings

We wish a source of supply for rock maple turnings approximately 6 in. in diameter and 10 in. long, sanded and finished in natural wood. Names and addresses of concerns in a position to handle turnings of this size will be greatly appreciated. (Conn.)

130–Plywood Plates

Our company is seeking a source of plywood plates, much like an ordinary dinner plate, about 9 in. in diameter. Can you supply names of manufacturers who make such items? (N. Y.)

131–Western Millwork, Lumber

We would like to buy the following materials: ponderosa pine, Douglas fir cut stock for window sash, doors, screen doors, window screens and blinds; also K. D. window sash done up in packages, and western red cedar lumber. Can you suggest a source of supply? (N. C.)

132–Kiln Dried Maple Strips

We have approximately 100,000 ft. bm kiln dried maple strips d2s to 1¼ in. x 2 in. and 1¾ in. by 2 in. bundled in random 30 to 60 in. lengths. Grade 90% clear. Inquiries invited. (N.Y.)

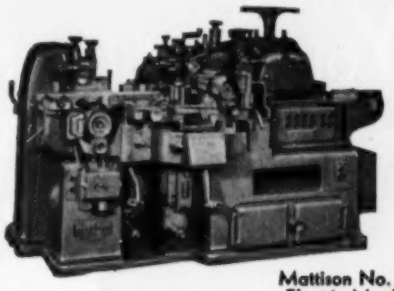
133–Table Legs

We are trying to locate a furniture manufacturer or woodworking shop to supply us with stylized table legs made of hardwood. Lengths 17 in. for coffee tables, 22 in. for end tables, etc., in moderate quantities. (Texas)

FOR YOUR MACHINE ROOM YOU WANT THE *Latest*

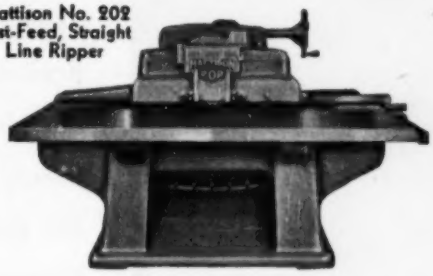
To be out in front you will want the newest and latest equipment for your machine room. The best will be none too good. We will be glad to show you what Modern Mattison Machines can mean to you in terms of greater volume, reduced costs, and better and more accurate work. As the first step write for new free circulars.

Write Today for Free Circulars



Mattison No. 276
Electric Moulder

Mattison No. 202
Fast-Feed, Straight
Line Ripper



Mattison No. 57F
Automatic Shaping Lathe

Mattison No. 303
Automatic stroke
sander

Mattison Machine Works, Rockford, Illinois
Please sent for Circulars on: Moulders.....Rip Saw.....
Turning Lathes.....Sanders—Power Stroke.....Hand
Lever.....Hand Block.....Variety.....Edge.....

Name.....Title.....
Firm.....
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MATTISON MACHINE WORKS
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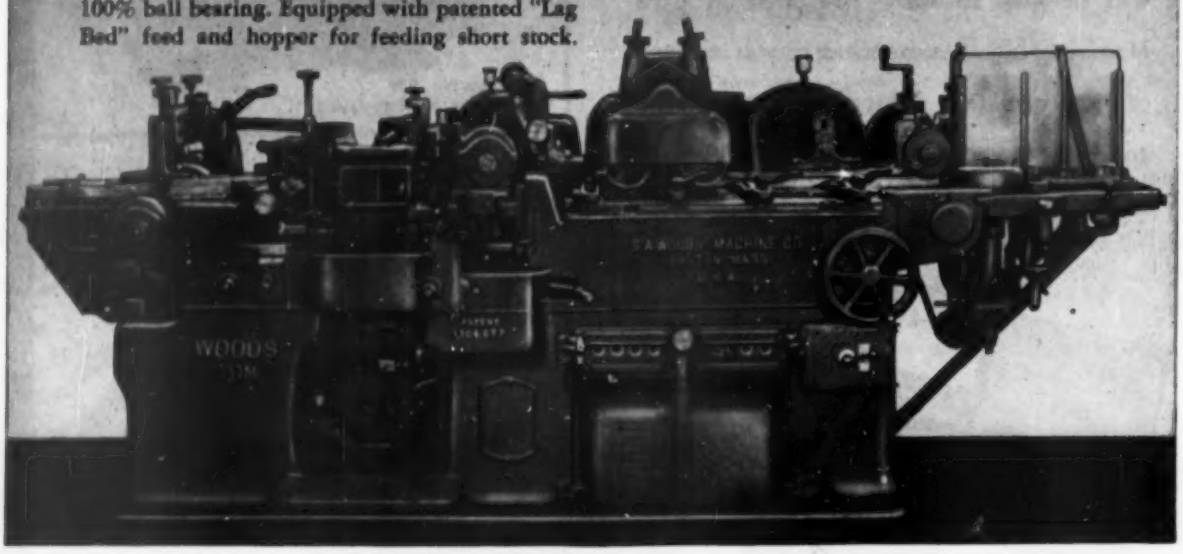
You can't beat the
WOODS 137M ELECTRIC MOULDER
. . . FOR SHORT OR LONG RUNS!

The Woods 137M Electric Moulder with patented "Lag Bed" feed is designed for versatility and flexibility for every woodworking plant that does moulding work of any kind, furniture, cabinets, chairs, trim or interior finish. Quickly accessible for profitable operation on long or short runs. Hopper feed is available.

Full particulars on request.
Send for new moulder bulletin.

Woods 137M 6" Electric Moulder. Motorized and 100% ball bearing. Equipped with patented "Lag Bed" feed and hopper for feeding short stock.



S.A. WOODS MACHINE CO.

The Moulders for today's and tomorrow's requirements

27 Damrell Street, BOSTON 27, MASSACHUSETTS

PORTLAND, ORE. • MEMPHIS, TENN. • LITTLE ROCK, ARK. • SAN MATEO, CALIF. • RICHMOND, VA. • MT. VERNON, N.Y.
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The "Era of Persuasion" Is Here

Consistently, WOOD & WOOD PRODUCTS has striven to arouse all wood interests to the need for an aggressive industry-wide program designed to protect and expand existing markets and to win back dwindling or lost markets still capable of being restored. Last month on this page some notable results were cited.

However, regardless of what is done industry-wide, a big job still must be done individually, in every wood-producing and every wood-converting plant—an urgent job that cannot be put off any longer.

We have emerged from the postwar seller's market. The honeymoon is over. No longer can we sit back and watch the orders roll in—orders for more of everything than we have the capacity to produce. It's happening in all industries. The buyer's market is here. From now on, it will take tough, competitive selling to get a share of the available business.

We don't mean that business is going to the dogs. As we indicated in our October editorial ("What Basis for the Jitters?"), and as the U.S. Chamber of Commerce stated more recently, conditions are ripe for great strides forward in living standards. New and better products are ready to pour off the assembly lines. Consumer income and savings are highest in history. Some economists claim that a 10% boost in consumer spending would offset a possible $20 billion cut in defense spending. Many marketing men are shooting even higher—"Learning to Live One-Third Better" is the theme they aim to sell.

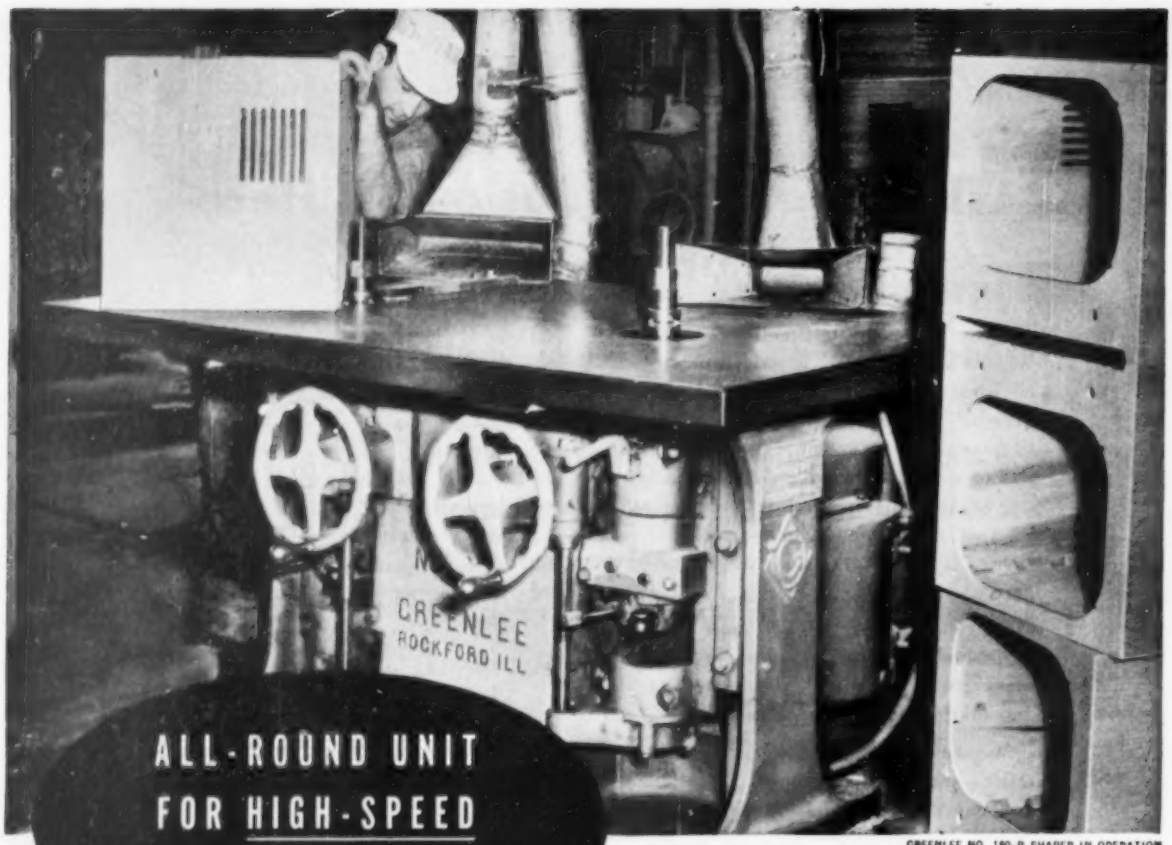
There is plenty of goods, and consumers have the money to buy. But the consumer is in a "show me" mood. The "era of persuasion" is here. It is no longer a case of the consumer begging or conniving for the things he wants to buy. He's in the saddle now. If you want him to buy what you have, you've got to sell him. If what you make fails to come up to his standards, he'll buy something else.

In short, if you want your share of the consumer's dollar from now on you've got to be more particular about what you sell him. Get down to the roots of your problem. Check your raw materials—are they the best you can obtain for the end-product? Check your plant layout—is it streamlined for maximum efficiency, minimum lost motion and waste? Check your workers—are they properly trained to understand the need for quality and cost control, for speed, for maximum effort? Check your machines and equipment—can you save money, cut costs, speed up output, produce better finished goods with more modern, efficient units? Check your management and marketing policies and methods—are they geared to the new, more competitive pace of the times?

Now is the time to take stock—and to take the steps that will correct your shortcomings, protect your investment, and make more money as your business grows in the great days of opportunity ahead.

But remember—*they have to be sold.*

(Comments, and inquiries regarding distribution of reprints of this message to employees and others, are invited.)



GREENLEE NO. 180-B SHAPER IN OPERATION AT IGLOO CABINET CO., CHICAGO, ILLINOIS

ALL-ROUND UNIT FOR HIGH-SPEED PRECISION SHAPING

... *Greenlee 180-B Motor Driven Shaper*

Here's the *double-spindle* Shaper that you find speeding production in so many leading woodworking plants today.

Its size, spindle spacing, and design for extremely high spindle speeds, makes the GREENLEE ideal for high output of light or medium-heavy work. And its belted-motor-driven feature eliminates need for a separate frequency changer.

Since the success of any shaper depends mainly on its spindles, all GREENLEE Shapers have spindles that are designed for maximum strength and rigidity. Of alloy steel, scientifically heat-treated, they are capable of withstanding hard shocks and stresses and still maintain their original fine balance. Equipped with precision ball-bearings, they operate at high speed with maximum smoothness.

Rugged frame construction, proper table design, highest quality materials and fine craftsmanship throughout, all combine with the other many features to make this an outstanding machine of excellent reputation.

For accurate, high-speed shaping and long-time, trouble-free service, investigate the GREENLEE No. 180-B Double-Spindle Shaper. Write today for complete specifications . . . ask for Bulletin No. 180-B. Greenlee Bros. & Co., 1921 Twentieth Ave., Rockford, Illinois.

MACHINERY & TOOLS
GREENLEE

GREENLEE WOODWORKING MACHINERY: MORTISERS · BORERS · SAWS · TENONERS · PLANERS · SHAPERS · MORTISING & BORING TOOLS

SPEAKING on Wood vs. Substitutes panel, Burdett Green (right) of the Veneer Association advocated greater promotion of wood on its merits. Other panel speakers, left to right: Dave Rautenbusch, Meyercord Co., Chicago; P. M. Clark, Finishes Division, Interchemical Corp., Cincinnati; William Hunt, U. S. Plywood Corp., New York; Joe Allegretti, Masonite Corp., Chicago; Charles H. Beiger, Sears-Roebuck & Co., Chicago

Wood vs. Competitive Materials . . . What's the Answer?

FPRS Speakers Cite Need for Better Marketing—Promotion—Utilization—Finishes—Quality and Cost Control—Product Development

"Wood Meets Competion" was the theme of the 1953 fall meeting of the Forest Products Research Society's Midwest Section, held in mid-November in Chicago.

Every angle of the subject was discussed in a determined effort to help wood producers and wood product manufacturers find ways of competing effectively against the inroads of materials emanating from outside the industry. The fostering of a clearer understanding of the strong and weak points of all competitive materials, and acceptance of specific materials whose use in combination with natural wood can aid in reducing costs and improving the end-product's position marketwise, also were objectives of the two-day meeting.

It was brought out that while competition from metals, plastics and other non-wood materials constitutes a definite hazard to wood's total markets, competition from hardboards and other wood-base materials could have the healthy effect of substantially increasing wood's total share in the national economy.

Wood's competition in the architectural woodwork field and in the manufacture of furniture and cabinets of all kinds was covered by Charles J. Rinehimer, president of the newly formed Architectural Woodwork Institute of America; Rollin H. Yale, Singer Sewing Machine Co. wood technologist, and Arnold Habig, president of the Jasper Corp., Jasper, Ind. T. J. Connelly, president, Dean Co., Chicago, offered some basic definitions of the term "forest products" at this session which was moderated by Carl J. Binner, Morgan Co., Oshkosh, Wis.

Wood and competitive raw materials were discussed by such proponents as Burdett Green, executive vice-president of the Veneer Association; Joseph J. Allegretti, director of central planning, Masonite Corp.; David F. Rautenbush, manager, Graining Division, Meyercord Co.; Edward Coleman, Filmwood Corp.; William Hunt, vice-president, U. S. Plywood Corp.; Charles Close, secretary, Hardwood Plywood Institute, and Percy Clark, Finishes Division, Interchemical Corp. Moderator of this session was Charles H. Beiger, head of the material division of Sears, Roebuck & Co.'s merchandise testing and development laboratories.

Many valid answers to the wood industry's competitive problems were offered in two sessions presided over by George Stanley, chief engineer, Pressed Steel Car Co., and Lawrence J. Fitzpatrick, president, J. J. Fitzpatrick Lumber Co., Madison, Wis. Speakers and their respective approaches to the question were:

In setting the stage for the opening session, Dean Co.'s Ted Connelly said: "The theme of this meeting—'Wood Meets Competition'—should be punctuated with a *question mark* because it should be apparent to all of us that in many ways we are not today effectively meeting our valid competition.

"At this time it would probably be well to define what we mean by *forest products*, so that there will be no question when we talk about wood substitutes.

"By *forest products* is meant *any product wherein the principal ingredient is wood in any form*—whether in the form of lumber, chips, fibers, or something else."

Charles J. Rinehimer estimated the annual architectural wood market potential at from $153,000,000 to $254,000,000 in the school field alone, plus a large potential in the hospital and religious fields. Potential 1953 market in the residential field he put at $371,000,000. The combined average potential totals $687,250,000, representing a market for architectural millwork that is "worth fighting for."

Speaking on the status of wood in the radio and TV cabinet field, Arnold Habig noted that in the early days of radio, cabinets of wood and wood

LIKE WOOD'S NEW COVER?

We hope you've taken a good look at the redesigned front cover of this issue. How do you like it? Do you think it's an improvement over the old, or not? We'd like to know how you feel about it.

By the way, how do you like the "insides" of this issue, also? Which article or articles did you find most interesting and helpful? Which one (or ones) were of no particular value to you?

Wood & Wood Products is edited for our readers, and your opinions will be most helpful to us. Thanks.—*The Editors.*

GEORGE STANLEY, chief engineer, Pressed Steel Car Co., moderated panel on Wood Can Meet Competition

products were dominant. As radio sets became smaller in size, wood cabinets came to represent only a small portion of the market.

The pressing question today, he said, is whether the same pattern will be followed in the TV field. Presently he sees wood in a strong position here for two basic reasons—beauty and better acoustical qualities—and because there is a tendency to produce more models, each in smaller quantities. Here wood has the advantage, he said, because of low tool-up and changeover costs inherent in the flexible production of a modern wood cabinet plant.

The tendency toward large TV sets has also enhanced wood's competitive position. Even in the matter of price, hardboards and printed grain have helped keep the wood cabinet manufacturer in a healthy competitive position. However, Mr. Habig pointed out, should a hard-hitting promotion program fail to maintain wood's market in the low-cost TV field, the thing to do is to combine plastics and wood to come up with a satisfactory cabinet, price and quality-wise.

Answering a question on the price differentials between wood and competitive cabinet materials in the ensuing discussion, Mr. Habig said: "Hardboard is 10 to 15% less; plastics as much as 50% lower. This means a set with plastic cabinet costing $250 will cost $275 with wood.

"If we can't sell the idea of wood as against a substitute there is no hope. Take the majority of TV manufacturers who operate on a plant production basis. Where a manufacturer is making 100,000 TV cabinets a month, $1 extra cost per cabinet means $100,000, and it's $200,000 in two months. That is real money. In our field there are three basic costs: tuner, tube and cabinet. Naturally, TV manufacturers try to cut costs at all three points. They are attracted by lower costs of competitive type cabinets in the low-price field. I'm not talking consoles, but $100-$200 class."

The wood industry as a whole, Rollin Yale pointed out, is interested in conservation of raw materials so that a continuing supply can be assured. With this background, his company has thoroughly investigated the use of panels made from production waste. Generally speaking, he said, chipcore appears to be a feasible material for core stock. His company also has been using 1/10 in. hardboard in place of three-ply panels made from 1/28 in. veneer. Advantages include ability to use cut-to-size stock and the fact that the panels are equally strong in all directions.

He pointed to resin-impregnated paper, or paper laminates, as another substitute material that has found acceptance. An advantage is that utility tables can be made of different colors to fit decorative planning.

Wood's greatest asset, Burdett Green emphasized, is wide public acceptance which he attributed to generations of satisfaction based on the beauty and serviceability of fine wood products. He pointed out that in fine woods there are some 20 to 30 different figure types, an unlimited range of physical and mechanical properties, and an inimitable character or beauty not approached by substitutes or imitations presently being marketed.

"Substitute materials," he said, "and particularly those that attempt to imitate wood, should stand on their own merits. Manufacturers should offer these materials for sale under their own names, honestly described for what they are. People do not like to be fooled into buying something that is not as represented, which is currently the case with some products being passed off as genuine wood. If you can build markets for substitutes through promotion, then certainly promotion can build markets for the real thing."

He criticized the wood industry for the "sad fact that some sound research projects have laid eggs because the results of such research have not been put into practice." As examples, he listed cigarette-proof table tops, stick-proof drawers, and hardened desk legs. It might be a function of an FPRS committee, he suggested, to investigate worthwhile wood research projects that have been carried to successful conclusion and then not merchandised by the industry.

Joe Allegretti pointed out that hard-

JOE ALLEGRETTI asked for acceptance of hardboard and other new products made solely from wood. Seated is moderator, Charles H. Beiger

board manufacturers have felt for a long time the effects of competition from products other than wood. "We do not feel," he said, "that we are a substitute material for wood, such as aluminum for doors and windows, plastics in radio and television cabinets, and steel in composite furniture and cabinet work. We have a wood product—a product completely and wholeheartedly wood."

For evidence, he pointed to his company's 400,000 acres of forest lands "that we manage according to the best forest management principles in existence in the State of Mississippi," its 50,000 acres of timber in California, its research staff of approximately 60 people doing all types of chemical and application research on wood, wood fibres, lignin and the various components of wood, and its new products development department continually working on application research in such fields as furniture.

Hardboards, he said, are relatively new and since the end of World War II have found applications in many fields previously unexplored. The growth in sales and applications is evidence that the product has its uses and merits serious consideration.

"Consequently," he concluded, "we would appreciate being considered as a *new wood product* rather than a product competitive to wood. We don't have the beauty of a fine veneer. We don't have the strength of a marine-grade plywood, and there are many places where natural wood or other types of wood product are very superior for certain uses. Nevertheless, there are many places where our materials do as good as other types of materials or a much superior job."

The case for the use of decalcomania transfers in the forest products

Continued on Page 62

NATURAL gum panels for reception rooms offer informality and utility at minimum cost

BRAND NEW field for hardwood plywood is developing in plywood block floors

WATER resistant adhesives have won back for gum plywood a large share of station wagon business

STRIKING architectural effects can be obtained from stock hardwood panels. Birch was used here

HOMES on wheels, smartly styled in natural finished hardwood plywood, are strong and rigid

How Hardwood Plywood Makers Fight for Markets

Grades, Trade Mark Are First Salvos in Battle— Quadrup'e Fees Create War Chest for Program

By **R. D. BEHM**
Director of Trade Promotion, Hardwood Plywood Institute

THE WOOD INDUSTRY has grown up. Segments which considered themselves strictly competitive in the past now are joining hands to tell the story of wood to the world. Instead of dissipating our strength fighting each other, we are beginning to concentrate our efforts to sell against nonwood materials such as metals, fabrics, and substitute products such as plaster boards. It is *wood against the field.*

Our own hardwood plywood industry has put its house in order to prepare for an aggressive trade promotion program. Only last summer the Southern Plywood Manufacturers Association merged with the Hardwood Plywood Institute to form one hardwood plywood group whose members have mills in all sections of the country. The hardwood plywood manufacturers have quadrupled their fees to our association to create a war chest for the initial phases of our program.

The finest promotion material is pointless if someone doesn't have material available to close a sale. We have found it is necessary to tie in with all segments of the wood industry in order to provide the package selling unit which people demand. We must make it easy for them to get our product, and therein lies the greatest problem in marketing which all of us must face.

Before we could execute our plans for the trade development involving these complex market and distribution problems, we had to analyze our own industry. We needed composite factors of the volumes of the various plywoods produced, the sizes and thicknesses most readily available and, more important, who purchased hardwood plywoods and why they ordered them.

We found that 90% of our total production was in six species: birch, oak, gum, mahogany, maple and walnut. There are certain appearance types within each species and certain length accumulations for which we have to find a home if efficient utilization is to be achieved. We made an analysis of the end-use brackets to determine the channels offering the best opportunity for developing markets.

The next step, actually carried along simultaneously with our exploration of production patterns and markets, was a quality control and trade marking program. The public can now identify hardwood plywood through the HPI label which features the slogan "Certified American Quality." As to quality, the records of our laboratory at Atlanta show the industry is averaging 13 to 14 cycles of soaking and drying—six times better than Commercial Standard Type II plywood.

We made random surveys of the specifier groups to determine why people buy plywoods and what information would be most helpful in developing the market. We learned that the greatest problem was one of

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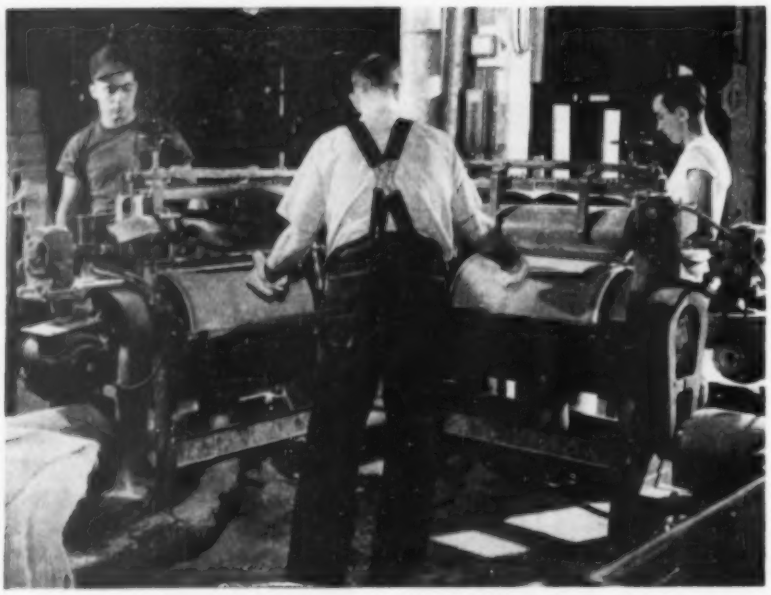
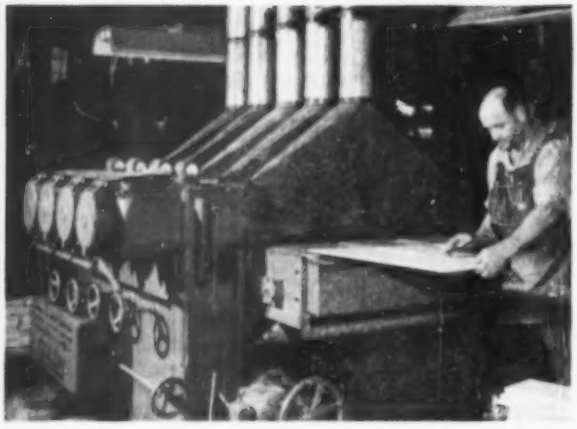


SHAPED SANDERS in tandem. Timesavers, Inc., machine at left sands convex surface of curved opera seat backs; one at right sands concave surface

What's New in Sanding Machines and Methods



MODERN four-drum sander of Solem Machine Co. for large volume flat surface finishing

'Exhibit in Print' of Latest Ideas to Improve Production and Get Better Finished Goods With Greater Economy

HOW TO GET IMPROVED PRODUCTION and better finished products with greater economy through the use of modern sanding machines, materials and methods was the subject of a three-day clinic for furniture manufacturers sponsored early in November by the Behr-Manning Corp., maker of coated abrasives, at its branch in High Point, N. C.

More than 20 manufacturers co-operated with demonstrations of their machines for the benefit of some 200 users of sanding equipment who attended. Said to be the first event of its kind in this field, the show was staged under the direction of John O. Amstuz, Behr-Manning's vice-president and chief engineer.

In co-operation with the sponsor and other manufacturers, WOOD & WOOD PRODUCTS now publishes much of what those furniture production people learned at the High Point clinic —and more—in this timely "exposition in print". Its purpose is to serve the interests of its readers in all parts of the country who have sanding problems, whether in the manufacture of furniture and cabinets or in the production of millwork, sash and doors, plywood, containers and many other wood and related products.

As the accompanying illustrations show, all types of sanding machines and materials were demonstrated at High Point: drum sanders, stroke sanders (automatic and semi-automatic), belt sanders, moulding sanders, block and edge sanders, disc sanders, string sanders, portable sanders, special converters and attachments for sanding machines, and miscellaneous sanding tools and wheels.

Features of today's sanding equipment for the wood industry are highlighted in the following descriptions.

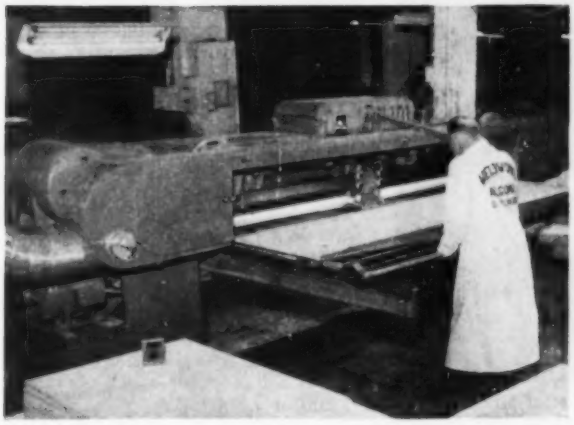
DRUM SANDERS

Solem Machine Co.—Model SE7-4 four-drum endless bed sander features massive construction, balanced drums, simple design, minimum maintenance. Outstanding is the shear cutting design producing a continuous abrasive cutting action against the work. Method of changing abrasive paper is a simple, one-man operation. Machine has automatic paper take-up and stretching devices. Dust hoods are furnished for both sides of each drum. Drums are driven by individual built-in motors with separate ammeters for gauging depth of cut or abrasive pressure.

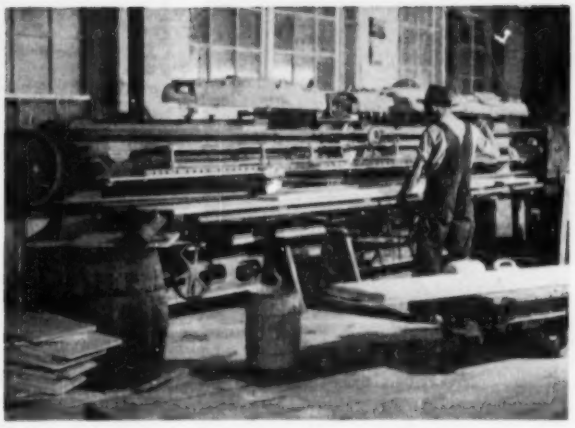
Handles flat materials from 1/32 in. to 8 in. thick. Machines from 31 in. to 85 in. are available. Variable speed drive is standard and infinite feed speeds are provided. Standard ranges obtainable are within 12 f.p.m. and 72 f.p.m., depending on type of product and class of finish desired. Adjustments are easily made and accurate, and total enclosure of running parts provides full operator protection.

Timesavers, Inc.—A new drum sander, called the "Shapesander," designed to eliminate tedious hand sanding of curved work such as opera chair backs and serpentine drawer fronts. Consists of an electric motor-powered drum with coated abrasive drum cover. Mounted above this sanding drum is a soft rubber segmented feed roller which firmly grips the work and moves it over the sanding drum.

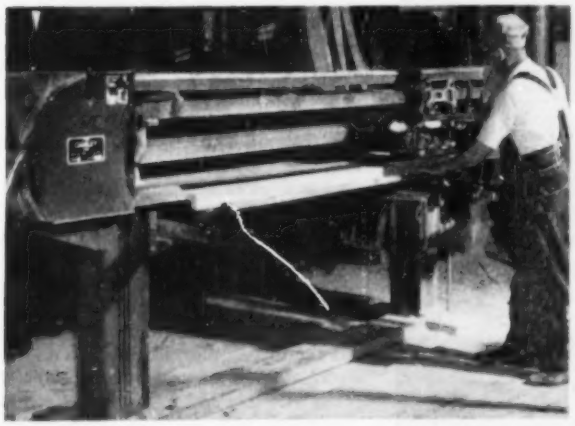
Drum is large enough to accommodate work fed through it in clusters of 8 or 10 at a time. Sensitive feed



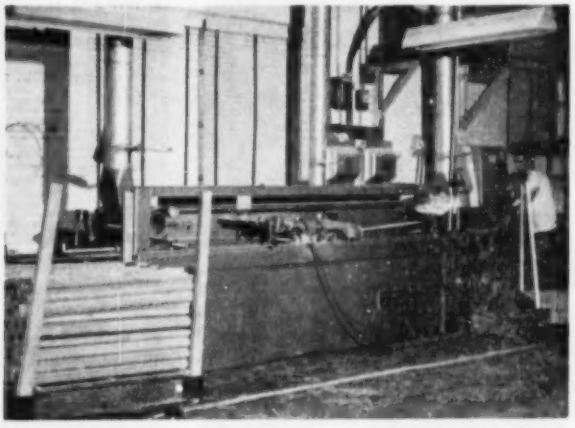
AUTOMATIC stroke sander of Mattison Machine Works is used on plywood and doors at Algoma (Wis.) Plywood & Veneer Co. plant



HYDRAULICALLY driven automatic stroke sander of Curtis Machine Corp. speeds production sanding of flat stock



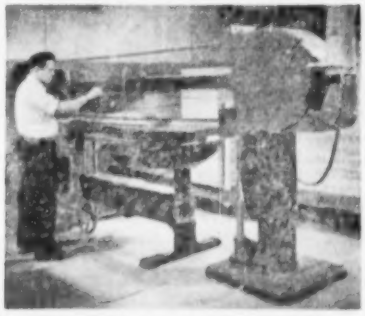
HIGH-SPEED semi-automatic, reversible stroke sander of Oakley Co. is said to cut sandpaper consumption



AUTOMATIC feed belt sander, which Bouligny Co. calls "Molsander," sands mouldings at 20 to 55 f.p.m.

AUTOMATIC stroke sander of Wysong & Miles being used to put light areas in plywood panel

SIXTY INCH double disc sander of B. M. Root Co. for use on assembled cabinets, other large areas



REVERSIBLE belt sander, one of five Oliver 18s in use at Bergsma Bros. plant, Grand Rapids, Mich.

arrangement permits satisfactory sanding of thin veneer as well as thick, solid stock.

Two grits of paper—one coarse and one fine—can be put on drum at one time, enabling a rough and a finish sanding operation without stopping production to change paper.

Two separate 5 h.p. motors power the sanding drum and the feed mechanism. Motors are controlled by a reversing switch which allows the operator to reverse feed. Three speeds are possible through regulation of step pulleys.

Sanding drum is 26 in. long and 16½ in. in diameter. It rotates at approximately 800 r.p.m. and requires 24 in. coated abrasive stock.

Ekstrom, Carlson & Co.—Production demands for faster finishing of many contoured shapes required to produce fine furniture explain the widespread acceptance of pneumatic sanding

UNIT of Pearson Sanding Machine Co. for converting mould sander to use of coated abrasive belt

CONTACT SANDER of Murdock Machine Co. utilizes 12-in. belt to sand serpentine, other parts

DRAWER SANDER of J. W. Lancaster, Inc., features glass lip insert on platen

FINISHING serpentine drawer fronts on belt sliding over graphite covered nose block

STRING SANDER utilizes narrow abrasive belt to smooth sides of intricately carved chair pieces

SANDING serpentine carved part with delappe disc wrapped around belt back-up spool

WORK-FEED UNIT of King Mfg. Co. feeding desk top along edge sander

CONVERSION UNIT for Curtis Type 8V semi-automatic stroke sander speeds production

drums such as this manufacturer offers. These were designed for free-hand sanding of irregular shapes regardless of grain direction and eliminating objectionable cross-grain marks.

When the drum is slightly inflated it acts as a pliable cushion allowing the flexible coated abrasive sleeve to conform to the shape of the contoured workpiece as pressure is applied. A fully inflated drum assumes a barrel shape and is well adapted for sanding concave work such as chair seats.

Pneumatic drums demonstrated at the High Point clinic were mounted on a 44 in. pedestal-type stand, with a 1 or 2 h.p. motor which operates at 1,200 or 1,800 r.p.m.

STROKE SANDERS

Curtis Machine Corp.—Hydraulically driven automatic stroke sander designed to triple the production sanding rate of flat stock over non-automatic sanding. Machine employs a coated abrasive belt running horizontally across a track-mounted traveling bed on which the work is laid. Hydraulically powered traveling head rides on a rail parallel to the belt and is used to press the belt against the work.

The hydraulic power unit drives the sanding pad across the belt at speeds up to 250 strokes per minute. Length of the stroke and speed of the sanding pad can be adjusted, without stopping the machine, by means of hand wheels and micrometer adjustments clustered on the drive pulley end of the unit.

The track-mounted work table is manually moved. Work placed on the table can thus be passed under the sanding belt at a rate or in a manner desired by the operator.

Curtis also showed a new conversion unit for its Type 8V semi-automatic stroke sanders.

Wysong & Miles Co.—New No. 603 automatic stroke sander designed for efficient sanding of flat work, particularly where size of stock varies frequently. Speed and stroke of the sanding pad are fully adjustable by means of conveniently located control knobs. These features permit positioning of material to be sanded where it can be handled with greatest efficiency.

The sanding pad and carriage are powered hydraulically by an electric motor-driven hydraulic pump. Maximum speed of the pad in an 8 ft. stroke is 60 strokes per minute. Shorter strokes may be increased in speed proportionately up to 225 strokes per minute for a 17 in. stroke. Stroke can be regulated for sanding in any desired area of the work table.

The sanding belt is powered by a 7½ h.p. motor for 5,000 f.p.m. belt speed, or a 10 h.p. motor for 7,500

f.p.m. belt speed. Reversible drum controls on the belt drive permit running the belt in either direction.

The sander is available in either a single or double belt design.

The machine is available in sizes to accommodate stock of 8 ft. and 10 ft. lengths. The double belt model accommodates 8 ft. stock.

Wysong & Miles also showed an oscillating and non-oscillating edge sander, well suited to large-scale production.

Oakley Co.—Model D reversible, single belt, semi-automatic stroke sander, said to cut sandpaper consumption in half for semi-automatic stroke sanding.

Its high-speed operation is considered responsible for preventing belt glazing and thereby extending belt life as long as the grain retains its sharp cutting edge. By reversing direction of belt travel, belts with grains worn in one direction can be re-used in the opposite direction.

On most roughing and cutting down operations, a 1,800 r.p.m. motor yielding a belt speed of 7,000 f.p.m. is recommended. For finishing operations, a 1,200 r.p.m. motor turning a belt at 5,000 f.p.m. is recommended.

The belt can be backed up with a pad ranging from 8 in. to 18 in. in size. Making use of the larger pads offers greater production.

The machine is designed to take a 24 ft. 10 in. belt for sanding stock up to 6½ ft. long. Oakley also exhibited a new drawer sander which uses two motors to power the belt.

Mattison Machine Works.—Model 303 automatic stroke sander designed for faster output, better quality work, longer belt life, and trouble-free operation. Users report very good results with all strokes, both long and short, plus sharply increased production with less effort and less fatigue to the operator. Mechanical simplicity, with minimum amount of moving parts, and reduced maintenance cost are other qualities cited.

Features simple, yet positive hydraulic system for smoother operation of shoe throughout length of stroke. Belt speeds adjustable to meet the user's needs. All controls centralized within easy reach of operator. Sand belt completely enclosed at top and both ends for dust control and safety.

Belts are easily and quickly changed. Aluminum sanding shoe is mounted on ball bearings for easy operation and control. Massive base and column construction designed for maximum rigidity. Available in single or double belt models.

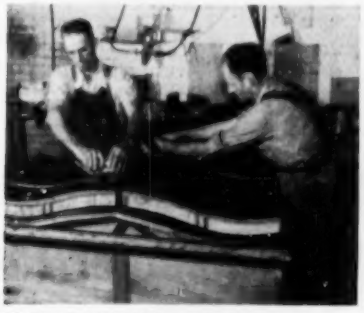
Length of 6 in. wide sand belt for 6 ft. machine, 24 ft.; for 8 ft. machine,

Continued on Page 68

PORTABLE belt sander cleaning up glued areas on mahogany cocktail table

HEAVY DUTY hand sander of Sundstrand Machine Tool Co. being used for wet sanding dresser top

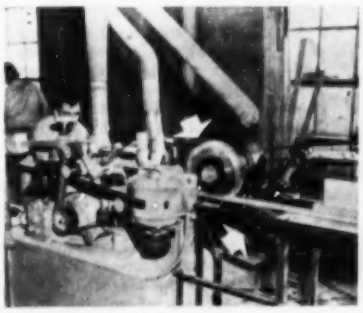
HAND SANDER with dust pick-up is featured by Porter-Cable Machine Co.



WET SANDING serpentine dresser drawer fronts with double padded sanders

ABRASIVE delappe disc being used to smooth contoured top of desk drawer separator

PORTABLE power tool being used to smooth contoured areas of a chair back bed



TWO "Sand-O-Flex" wheels on same motor sand mouldings at Modern Trends Furniture plant, Houston

BLOCK AND EDGE sander of Pearson Sanding Machine Co. is adapted to short runs and special jobs

Month ending _____

Lumber Items Required	MINIMUM		MAXIMUM	REQUIREMENTS				ACTUAL ON HAND			ON ORDER			To Be Ordered
	Kiln Dried	TOTAL		First 30 days	Second 30 days	Third 30 days	TOTAL	Feet	Amount	Unit Cost	First 30 days	Second 30 days	TOTAL	
POPLAR														
4/4 #1 Com.	40,000	100,000	175,000	43,000	56,000	25,000	124,000	125,000	$18,125	$145.00	-0-	-0-	-0-	75,000
4/4 #2A Com.	50,000	125,000	200,000	37,000	65,000	60,000	162,000	93,000	8,835	95.00	39,000	50,000	89,000	80,000
5/4 #1 Com.	15,000	50,000	100,000	9,000	19,500	18,000	46,500	150,000	25,200	160.00	-0-	-0-	-0-	-0-
5/4 #2A Com.	10,000	50,000	100,000		15,000	15,000	30,000	120,000	13,200	110.00	-0-	-0-	-0-	-0-
Total	115,000	325,000	575,000	89,000	155,500	118,000	362,500	496,000	65,460		39,000	50,000	89,000	155,000
MAPLE														
4/4 #1 Com.	75,000	120,000	200,000	75,000	50,000	30,000	155,000	98,000	15,190	155.00	50,000	50,000	100,000	50,000
4/4 #2 Com.	50,000	100,000	150,000	40,000	30,000	75,000	145,000	130,000	13,000	100.00	-0-	75,000	75,000	75,000
Total	125,000	220,000	350,000	115,000	80,000	105,000	300,000	228,000	28,190		50,000	125,000	175,000	125,000
ITEMS NOT REQUIRED														
POPLAR														
4/4 FAS							None	25,000	$4,000	160.00				
4/4 #3 Com.							None	10,000	400	40.00				
Total								35,000	$4,400					
MAPLE														
4/4 FAS							None	40,000	$6,800	170.00				

FIG. 1—Example of monthly report on inventory control

How to Guard Profits With Lumber Inventory Control

Sound System Vital for Purchasing and Judging Raw Material Requirements in Wood Industry

By VINCENT E. NOLTEMEYER

Secretary-Treasurer
Gamble Bros. Inc.

IN TODAY'S highly competitive market, management must be provided with vital cost and accounting information that will aid in policy making and financial control. The man responsible for accounting and costs should have executive ability, for if he is to be of real value to his company, he must have knowledge of the company's financial structure—as well as production and sales methods.

He should be thoroughly acquainted with all aspects of the business so he can properly interpret all cost data and present to management the information which it needs to make decisions on policy-making.

In a very small business, the owner may run the whole show. If he is to be successful, he must keep his fingers on every phase of his operation and work relentlessly to keep his costs down and obtain maximum efficiency from his operation and personnel.

In a medium and large size concern, responsibility is vested in department managers and an organization chart designed to show the flow of duties. It is true that in a company employing around 1500 employees, an elaborate system is required. An elaborate system does not mean a complex system. It simply means more detail, thus requiring more employees to handle all work required.

In this series of articles, various methods will be discussed that deal with different assets of the business. Specialized forms will be shown, also how they can be used to effect the necessary internal controls of the business.

Procurement of lumber and other

NOLTEMEYER'S MANUAL HELPS BUILD PROFITS

"Your knowledge of costs is nil. Cost details on every operation are needed. Plastics know their costs, and so do metals. You must know costs in detail, and soon, to meet competition."

One of the most significant observations made at the recent "Wood Meets Competition" meeting of the Forest Products Research Society's Midwest Section (see Page 21), this was Charles Beiger's advice to wood fabricators.

Basically, his statement sums up the purpose of the accompanying article. It is the first of a short series which Mr. Noltemeyer, who is secretary-treasurer of Gamble Bros., Inc., Louisville, Ky., is writing exclusively for WOOD & WOOD PRODUCTS.

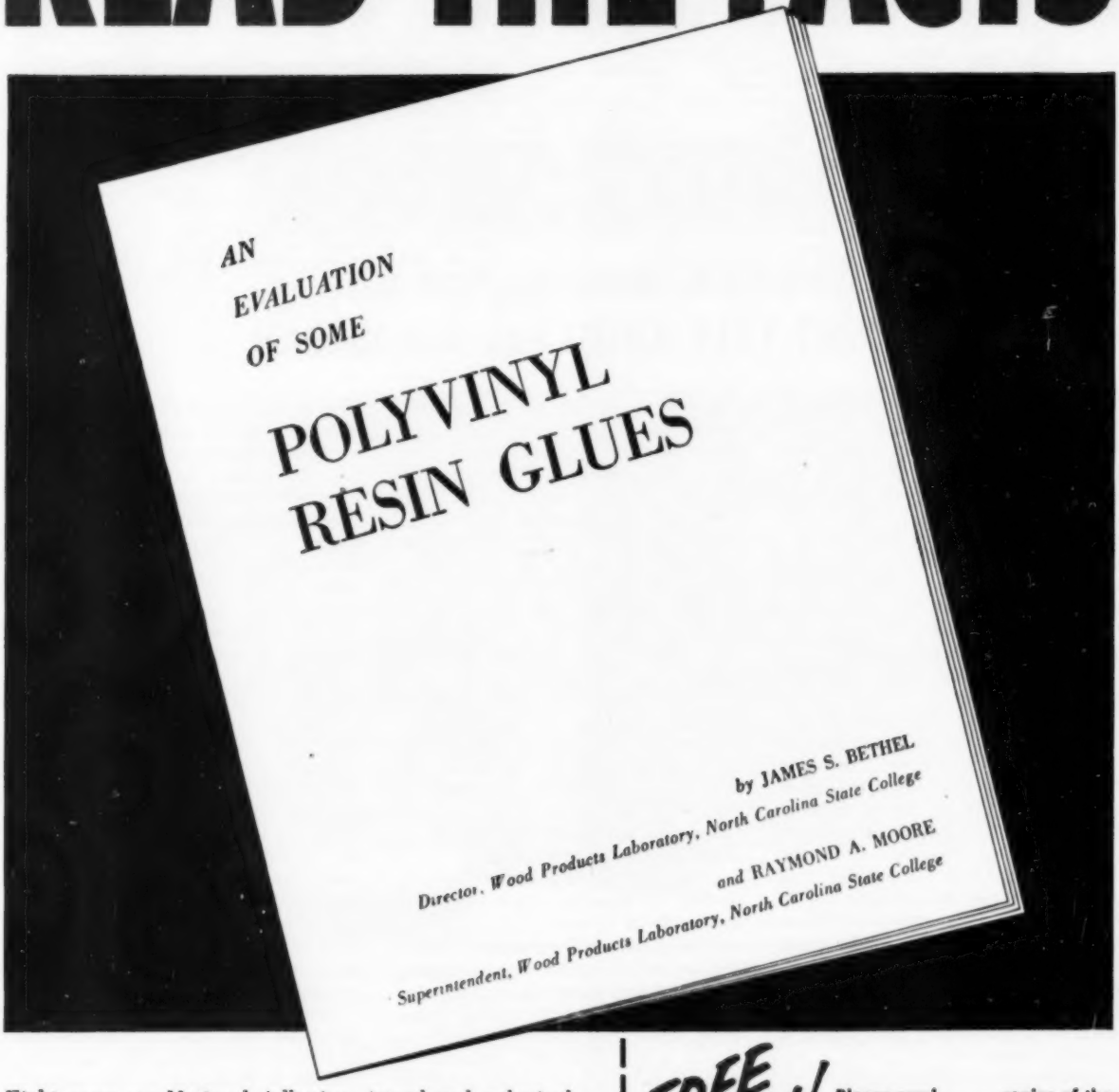
Since materials represent a substantial part of the cost of finished wood products, he wisely launches his series with a discussion of lumber and inventory controls. His next article will cover different methods of valuing lumber with the emphasis on incoming rough lumber.

Mr. Noltemeyer is author of the manual, "Accounting and Cost Controls in the Hardwood Conversion Industry," a practical, well-illustrated handbook clearly defining methods that help build profits. Recognized as a highly competent authority on his subject, he has originated many systems and devices for greater efficiency in wood industry accounting. He has served as cost accounting committee chairman of the Hardwood Dimension Manufacturers Association and as president of Louisville Chapter, National Association of Cost Accountants.

Hundreds of copies of his manual, as mentioned above, are already in use throughout the industry. It belongs on the desk of every executive who is responsible for keeping a wood conversion business at profitable levels.

The book sells for $6 (postage prepaid) and may be obtained either through WOOD & WOOD PRODUCTS or by direct order to Mr. Noltemeyer at 4601 Almond Ave., Louisville 9, Ky.

READ THE FACTS



Eight years ago, National Adhesives introduced polyvinyl assembly glues to the furniture industry. Many similar products followed. Unfortunately, they were many times improperly used.

Therefore, we decided to dispel some of the doubts still surrounding polyvinyl assembly glues.

At our request, North Carolina State College, Wood Products Laboratory made a comparative study of the performances of (1) an established, time-proved vinyl copolymer assembly glue, (2) an animal glue, and (3) National's *new* Wood-Lok® 3026.

The full North Carolina State College report is now ready in booklet form. Copies are available upon request.

FREE Booklet!

Please send _____ copies of the POLYVINYL RESIN GLUES report prepared by North Carolina State College, Wood Products Laboratory.

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Company_____

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Address: NATIONAL ADHESIVES, 270 Madison Ave., New York 16; 3641 So. Washtenaw Ave., Chicago 32; 735 Battery St., San Francisco 11.

		WEEKS ENDING												INVENTORY		
		10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9	12/16	12/23				
MAPLE 5/4 #1 Com.	Customer Requirements	MMC 10,000											10,000	5/4 #1 Maple	Kiln Dried In Kilns Well A.D. Green	11,391 -0- 19,338 -0-
	Will Have	31,391														
MAPLE 5/4 #2 Com.	Customer Requirements	WB 9,000	GB 5,000	ESB 5,000	CS 5,000	MHF 5,000	MHF 5,000	MHF 5,000	BA 4,081	HT 3,100	SD 5,000	KA 5,000	56,181	5/4 #2 Maple	Kiln Dried In Kilns Well A.D. Green	20,740 -0- 12,325 -0-
	Will Have	20,740	3,135	-0-	-0-	-0-	-0-	-0-	-0-							
RED OAK 4/4 #1 Com.	Customer Requirements	RCA 10,000		DJH 15,000	10,000								35,000	4/4#1 Red Oak	Kiln Dried In Kilns Well A.D. Green	16,575 12,627 3,503 -0-
	Will Have	16,575		12,627												
POPLAR 4/4 #1 Com.	Customer Requirements			BS 28,000	RFD 25,000		WC 10,000		RF 25,000				88,000	4/4 #1 Poplar	Kiln Dried In Kilns Well A.D. Green	22,126 -0- 100,668 -0-
	Will Have	22,126		22,126	25,000		10,000		25,000							
POPLAR 4/4 #2 A Com.	Customer Requirements	ES 8,000	ABC 1,000	RS 1,000	TR 21,000	RS 23,000	RS 12,000	PM 20,000	RT 20,000	LS 10,000	MFT 10,000	TVW 10,000	147,000	4/4 #2A Poplar	Kiln Dried In Kilns Well A.D. Green	14,034 22,350 67,264 -0-
	Will Have	14,034	28,384	16,384	15,384	67,264	38,264	26,264								
SAP GUM 5/4 #1 & Btr.	Customer Requirements	TV 15,000	AG 15,000	SEL 12,000				BF 15,000	DN 15,000	SF 15,000	HCM 15,000	SEK 15,000	107,000	5/4 #1 & Btr. Sap Gum	Kiln Dried In Kilns Well A.D. Green	-0- 40,756 41,284 -0-
	Will Have	40,750	25,750	10,750				41,284	26,284							
OTHER																

FIG. 2—Kiln dried lumber production schedule

raw materials is a significant function. When it is considered that materials represent from 40 to 65% of the total operating costs of a business, it becomes apparent that purchasing is one of the fundamental essential departments of the company. Errors in purchasing are costly. The individual responsible for procurement should be acquainted with market conditions, so that he will know where to go to buy the right materials at the right time, in the right quantities and at the right price.

There must be coordination of purchasing with other departments. In working with production personnel, the purchasing officer gathers information as to the quality of material that must be maintained for efficient and economical utilization. From the financial standpoint, he should consult with proper management before buying any excess quantity and determine the availability of funds. From the standpoint of the Sales Department, he should be informed of sales forecasts, as a guide in the establishment of a purchasing policy over a period of time.

Movements of lumber require constant study. Quantities of each species and grade must be regularly observed to see that there is sufficient turnover. There should be no accumulation of lumber items that will not be needed within a reasonable time, thus avoiding a financial problem and also the possibility of degrading. An understanding of ideal lumber procurement comes from intelligent control. It is not a matter of form or routine, but rather to exercise a direction, or to regulate.

It is desirable that the lumber purchasing executive receive copies of sales order acknowledgments, which will show quantity of different grades, species and thickness required to produce the item. Specific firm orders create the demand for raw material. However, this is not sufficient.

Consideration must be given to the normal month-to-month requirements of certain customers who are consistent buyers of same species and grades of wood products. Therefore, an intelligent review of anticipated production leads to the setting down of requirements for various grades.

Some authorities agree a 90-day supply is sufficient for maximum requirements and approximately one-third of this amount to represent the minimum. These factors are variables and not constants. They require changes in respective quantities up or down as occasion demands.

An example of a monthly report on lumber inventory control is illustrated in Fig. 1.

This analysis will assist in establishing a sound purchasing program, consistent with quarterly requirements and the financial position of the company. Only two species have been shown in this illustration, whereas on a complete report, all woods would be shown, including in a separate section items not needed and which may be sold.

It is noted this type of control will furnish monthly analysis of minimum and maximum requirements, orders booked, quantities on hand, and amount on order, or to be ordered.

For purpose of illustration, refer to 4/4 No. 1 common poplar, the first item listed on this exhibit. It has been determined from the actual requirements for this grade that a minimum of 40,000 ft. *kiln-dried* should be maintained in dry storage to provide necessary raw material to meet scheduled production of customers' orders.

Aside from the actual requirements for various grades, a minimum inventory will always be carried. Experience will show that there is a constant potential demand for certain species, grades and thicknesses, and the company must be prepared to meet anticipated needs. In times of business recession, or seasonal fluctuations, a business will always maintain a minimum of inventory.

The *maximum* quantity of any item should be established based primarily on the financial position of the company, and secondly on total requirements for a 90-day period. The figure of 175,000 ft. No. 1 common poplar shown in this exhibit is merely an example of what may be established. If the maximum is exceeded for any particular grade, it will create an immediate demand for extra cash; unless other grades are reduced proportionately. Each business will use its own judgment in setting these maximums.

"Actual on Hand" is taken from the perpetual inventory of lumber. Instructions on setting up inventory records is discussed in the author's manual, "Accounting and Cost Controls in the Hardwood Conversion Industry."

The amount of 125,000 ft. shown here indicates sufficient volume is already on hand to meet the next 90-day requirements. But unless orders are placed for delivery within a short time, a serious situation could develop. Lumber must be procured sufficiently in advance or requirements to provide for proper seasoning, as well as kiln-drying.

Under "On Order" column, no orders have been placed for delivery

Continued on Page 60

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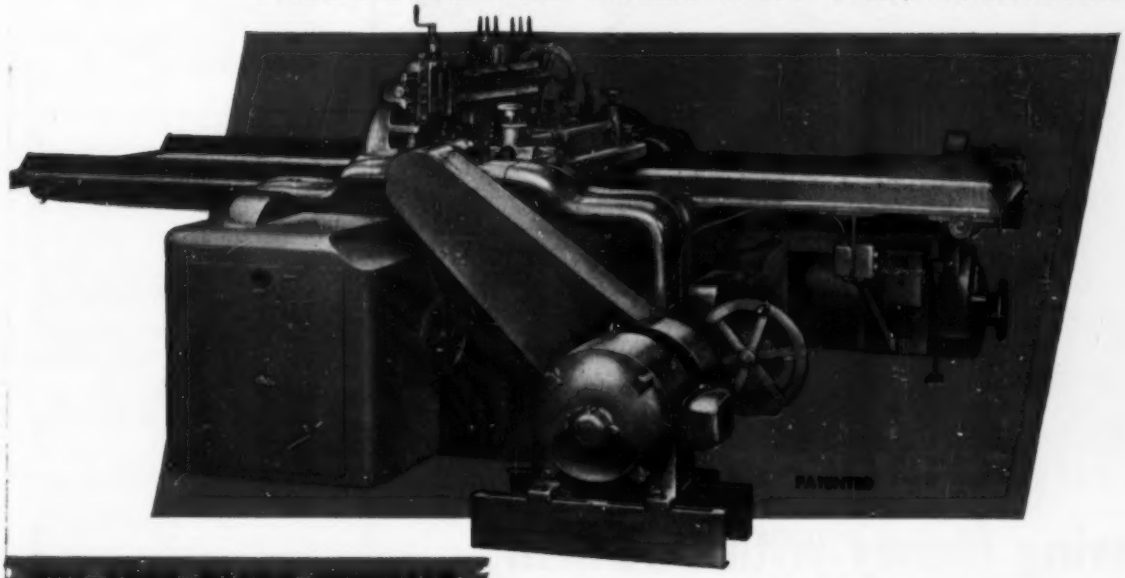

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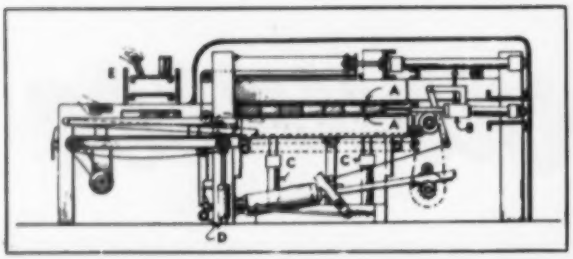

THREE VIEWS of steam heated edge gluing machine. FIG. 1 (right) gives overall view. FIG. 2 (below) shows operating detail. FIG. 3 (above) is cross section showing—A-A: Upper and lower platens (closed); B: Hydraulic plungers for edge pressure, extended; C-C Hydraulic cylinders for flattening core blanks; D: Hydraulic plunger to raise and lower front ends of shelves; E: Glue applicator conveyor, above lay-up station.

Saving Money With One-Man Lumber Core Glue Presses

How Steam Heated and Electronic Edge Gluers Can Be Used to Reduce Man-Hours and Costs

By THOMAS D. PERRY

THE FACT that the American factory worker is receiving a higher wage than ever before is distinctly encouraging. Well paid workers are better housed, more bountifully fed, are happier and more efficient.

These are the workers able to purchase more of the things that make life worth living; more radios, more TV sets, more washing machines, more automobiles, better furniture and the like. There is, however, a logical correlary to this situation, i.e., that the man-hours, per unit of production, must not be allowed to price the above products out of reasonable cost ranges.

This means, inevitably, that production equipment must incorporate more and more labor saving and automatic devices to supplement manual labor, and thus keep the man-hour production limits in line with current sales possibilities.

The relatively recent development of electric controls, of electronic heat, and of heat reactive resin adhesives, are all commendable steps in this di-

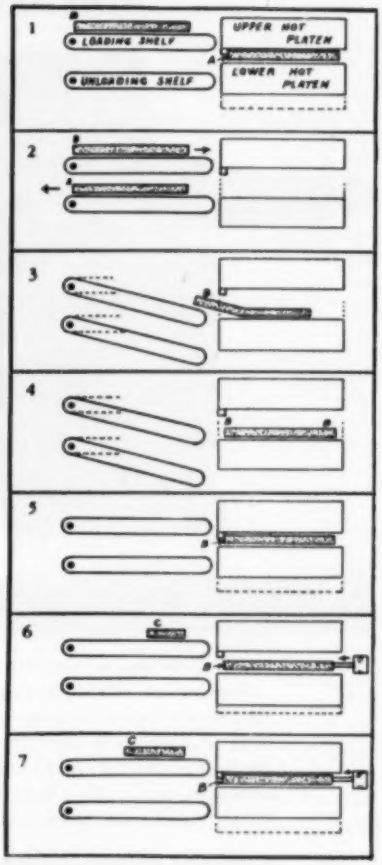

FIG. 4—A single core progressing through steam heated edge gluing machine: (1) Core B has edges glued. Core A is cured, ready to remove. (2) Core A on unloading shelf, lower platen open. (3) Core B slides from tilted shelves into open hot press. (4) Core B on lower platen. (5) Press closes on Core B to flatten all strips. Shelves return to horizontal. (6) Hot press opens part way to allow side pressure to act. Hydraulic rams push all strips to tight edge joints. Core C lay-up begins. (7) Hot press closes for curing cycle. Side pressure and Core C lay-up continue

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FIG. 5—Exhibit of one-man electronic roto-gluer. (Upper section is glass enclosed to allow view of working parts)

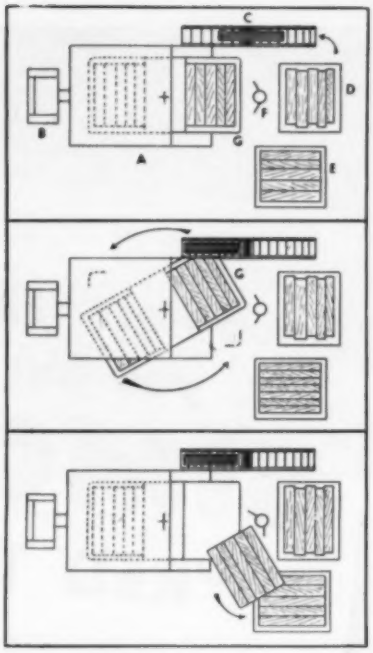

FIG. 6—Sketch of electronic roto-gluer in action. A: Roto-gluer, during cure and lay-up. B: Transformer, detached to provide adequate cooling. C: Glue applicator, with conveyors. D: Freshly jointed strips for lumber cores, on truck. E: Completed core blanks, on truck. F: Operator. G: Rotating lay-up table

rection. Each provides for the better regulation of various manufacturing steps according to a predetermined sequence on a standard elapsed time basis.

Two typical examples will be cited in the edge gluing and clamping of blanks for lumber cores, in which the normal two to 4-man crew is reduced to one man without serious sacrifice in the cost (per man hour) of production (per unit). There are doubtless many other examples of similar import that will occur to readers, but it may be better to describe these two in an understandable way, than to try to include so many that the descriptions may be too general.

One of these examples employs steam heated platens to cure the resin adhesives in the core joints, while the other uses electronic heat for that purpose. It should be noted that these two machines have many points of dissimilarity, in addition to using different heat sources.

In both instances the pressure required to flatten the core strips is relatively nominal, while the edgewise pressure should be approximately 150 lbs. p.s.i. of glue joint, to produce tight snug joints in hardwood made ready on a straight line rip saw.

An overall photograph of a machine which clamps cores with steam heat is shown in Fig. 1, with an insulating hood over the hot plates, at the rear of the picture. The glue conveyor in the center of the photograph is so arranged that the prepared core strips ride over the glue roller, directly below the inverted bottle serving as a glue resevoir, and move toward the right until they strike the slanting gate across the conveyor at the far right.

This gate reverses the travel of the conveyor and returns the groups of core strips to the front of the machine directly above the lay-up shelf. This is a double pass over the glue roller, and insures an ample amount of glue in the joint.

This upper shelf is the lay-up table where the edge glued strips are placed by the operator, during the period when the glue joints of the preceding core are being cured between the heated platens. The lower shelf is the delivery table from which the glue cured core blanks are removed by the operator.

In the photograph, the glue conveyor, the lay-up shelf and the delivery shelf are all loaded, in order to indicate the function of each; but in actual service this charging and discharging is progressive, and more than one core is seldom in sight at one time. The pushbutton controls are shown at the operator's right, on the frame of the machine and directly above the open switch box.

The throat of the machine accommodates single or multiple (as shown) lengths up to 84 in. and will handle cores up to 54 in. wide. If longer cores are required, they can be loaded through a side door, opposite the heated platens, and the adhesive cured by progressive forwarding between the hot platens. The machine will handle stock from ¾ in. to ⅝ in. thick.

The actual curing cycle may be regulated between 1 to 3 minutes on ¾ in. stock, and 3 to 5 minutes on ⅝ in. stock. The elapsed operating interval between the cures, during which the hot press is open for loading and unloading, is about 40 seconds, the cycle being controlled automatically. Under ordinary conditions the lay-up takes place during this curing cycle. The average daily production of this machine on assorted sizes ranges from 3,000 to 4,000 sq. ft.

A closer operating detail is shown in the photograph of Fig. 2, in which the first core has been laid up and the operator is holding the edge glued strips for the next core.

The various mechanisms that advance the core through the progressive stages are indicated in the cross section of Fig. 3, and are described in the caption. The several hydraulic

Continued on Page 66

ORDER REPRINTS NOW

Because of a lively and continued reader interest in Mr. Perry's series of 14 articles (concluded in the December issue) covering a wide range of questions and replies about gluing, WOOD & WOOD PRODUCTS will shortly reprint them all under one cover.

The booklet should be an invaluable aid and ready reference manual for top management, foremen and employees responsible for gluing operations in any and all types of woodworking plants.

Now is the time to write and reserve the number of copies you will need for the personnel in your plant. Do it now and avoid disappointment later.

ABOVE—Gordon Newhouse (center), Kittinger Co., college graduate employee, learns blueprint tips from Draftsman Walter Ramsey (left) and Author Batson. RIGHT—Newhouse inspects lumber in yard

A Plan to Train Key Men for Management Jobs

Department-by-Department Guidance Through Plant, Intensified College Curricula Promise Best Results

By JACK E. D. BATSON

Production Manager
Kittinger Co., Inc.

THE WOODWORKING INDUSTRY requires such a variety of abilities in its key men that a definite training program is essential, and is becoming more so as our technical knowledge increases.

Whether this training can be handled in the shop is a matter of opinion, but it seems that with the amount of information now available, it is almost impossible for a man, working full time, to absorb all this material.

A more logical method seems to be the starting of training in our forestry colleges. These colleges are now offering a definite program for the various fields of the woodworking industry. Whether we agree with their programs as set up at present is not as important as the fact that they are being organized so as to give the student an opportunity to select the field in which he wishes to specialize. Naturally, each field of endeavor is going to require a different curricula, and this is where the colleges should give their most careful attention.

After the student graduates, it is up to his employer to see that he is fitted properly into the organization. There is a lot for him to learn, and though his basic training will be invaluable, his value to the company will depend on the guidance and training he receives from the personnel with whom he works.

Dexterity tests, psychology tests,

STAN BEARSS, yard foreman, advises Newhouse on kiln drying technique

LEFT—Quality of workmanship is inspected by Newhouse and Andrew Kreppel, mill foreman

RIGHT—Finishing Foreman Peter Gus (left) and Cabinet Foreman John Kreppel show what to look for in veneers

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WOODWARD 3-0862

and aptitude tests are becoming standard procedures in many employment offices. These tests together with an indoctrination procedure that gives the new employee an over-all picture of the company, what is expected of him, his chances of advancement, and rules of decorum, gives assurance that the man gets started on a job that he understands and for which he has the qualifications.

The employer has a great responsibility in the proper training of the new employee. Too often, he is started off as an odd job man to do leg work for one or more of the older men. Granted that he learns something from this —it is poor practice, and will not give him a chance to organize his learning or develop his maximum usefulness

If we want to develop a general factory man, he should be started off in the yard working with the yard foreman. The foreman will have him work with the lumber inspectors and the kiln operator and gradually shift some of the responsibility of the supervision of these jobs on to him.

When he has learned the problems and responsibilities involved in this work, he should be shown how to predict lumber requirements and be given the responsibility of lining up sources of supply and requisitioning as needed.

The next step is the drafting department. Here he will gain a thorough knowledge of blue print reading and methods of construction. In the actual detailing of individual parts and the billing out of the lumber required, he will run into the reasons for using floating frames, slotted screw holes and offsets.

Some time should now be spent in the machine department to get acquainted with the functions and limitations of the various machines. This information can be gained while working as timekeeper and expeditor.

The next step is to the time study and routing departments where the actual performance of these duties will complete the training of the man up to this point.

The time spent in the cabinet, finish, and upholstery departments will depend to a great extent on the size of the company and whether these operations are conveyorized.

If our man now works with the traffic department, he will learn the importance of departmental cooperation, correct shipping information, proper scheduling of supplies, and other operations.

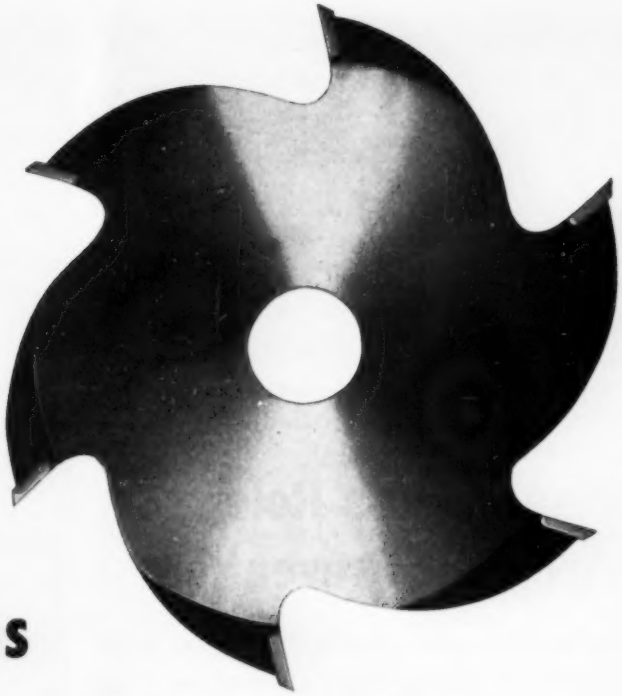
Time should also be spent working directly with the purchasing department, the cost department, and the personnel department.

How long is all this going to take? This depends on the size of the company, how specialized the man's function is going to be, openings available for him in the company, and the ability and desire of the man himself to learn the job.

The ability of the new employee to absorb this in-plant training and assume the desired degree of management responsibility hinges, however, on what he as a student derived from his college training. Here the colleges can provide a most useful service by stressing the following points:

1. Instructors should not only be learned, but should be practical men, preferably with experience in the field.
2. Colleges should work closely with industry, get its point of view, and try to incorporate their practical suggestions into their curricula. Most of the colleges are doing this, but some apparently not too seriously.
3. After a subject has been covered in class, field trips should be arranged to crystallize in the student's mind what he has learned in class. Having covered the subject, the student will be able to ask intelligent questions about what he sees and so gain and increase his knowledge.
4. Students should be encouraged and helped in getting summer jobs in the type of work in which they are going to specialize.
5. Students should be given as much lab work as possible. Use the time now spent on memorization of data for the more useful and practical purpose of performing experiments and looking up needed information in technical books and trade journals.
6. For those students specializing for work in the furniture industry, short courses should be given in the following subjects:
   1. Design and construction of furniture.
   2. Period furniture
   3. Fabrics
   4. Interior decorating
   5. Time study and methods
   6. Routing
   7. Waste analysis
   8. Labor relations
   9. Cost analysis
   10. Quality control
   11. Marketing
   12. Safety

Editor's Note.—*The foregoing article was adapted from a paper presented by Mr. Batson at the Northeast Section, Forest Products Research Society meeting at New Haven, Conn. Nov. 5-6.*



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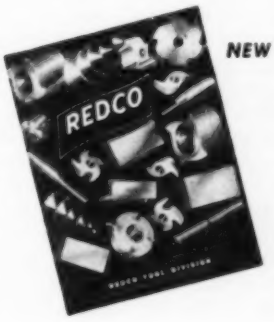
REDCO Grooving Cutters boost production —that's what users in the furniture, cabinet and flooring industries have proved to their own satisfaction. These carbide tipped cutters take a deeper cut, a faster cut, a cleaner cut and hold sharpness for many more productive hours. They are used, for example, to cut spline grooves, chamfer, dado by nesting, cut tongue and grooves using spacers and cut single or multiple grooves. And, on-schedule sharpening done in your own plant on the simplified Redco Precision Grinder, will keep these grooving cutters at their production best.

Standard Redco Carbide Tipped Grooving Cutters in 9 standard widths, 6" diameters and 6 precision diamond ground teeth are available for prompt delivery. A packaged set of grooving cutters in 7 sizes, ⅛" to ½" in increments of 1/16", are individually packed in a shipping carton. Special sizes can be made to match your own particular requirements.

This is the Redco Precision Grinder, designed and built by woodworking specialists to simplify the maintenance of high speed and carbide tipped tools.



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Send for your copy of the new Redco Carbide Cutting Tools bulletin.

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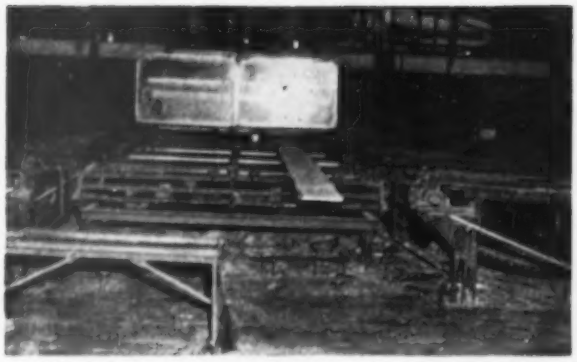

ADJUSTABLE plexi-glass shields protect edger operators from occasional small flying knots

PROTECTIVE cab has saved cat operators from injury by falling trees and flying broken cables

Management's Role in Accident Prevention

Dynamic Executive Leadership, Plus Able Director and Active Plant Committee, Can Make Safety Program Pay Off in Any Plant

By JAMES G. BADGER

Vice-President and Treasurer, Edward Hines Lumber Co.

SAFEST sawmill crew in U.S.A., this group at Hines, Oregon celebrates 2,000 successive injury free days

THE ROLE OF MANAGEMENT in accident prevention is a channel of executive action too often subordinated to a place of minor importance by our industrial society. Yet, with the passing of each business day, the importance of management interest in this matter has been magnified greatly.

Let us consider how we in management can approach this problem of accident prevention. Many of us are not schooled in mechanical engineering or the various specialized sciences found in the wood products industry. Others of us did not have the opportunity of working at the various levels of plant management where we would "feel the pulse" of these safety problems. Yet, it is possible for all of us to acquire a basic appreciation of accident prevention in our plants—whatever size they may be.

Based upon my experience in our own company, the management that has any affect upon accident prevention starts with the Board of Directors and carries down through the president, operating vice-presidents, managers, superintendents, foremen, safety engineers, personnel managers and any others who may directly or indirectly represent the management team.

Top management insists on safe machines, tools and equipment. When a machine is needed, the specifications are carefully checked, studied and compared with other makes to be certain that it is a safe machine and safely designed according to the several codes. Price is secondary to safety protection—enclosed gears and sprockets, proper saw and belt guards and other features.

Top management goes further in stressing quality of equipment—the best grades of wire rope, coil chain, best grade of ax handles and canthook handles. The difference in price in the top grades of canthook stock, for instance, is comparatively small—about a nickel or dime each, but a man's life or limb may hang in the balance.

Having thus discharged these responsibilities of machines, tools and equipment, and having carefully chosen its employees, top management must rely largely upon supervisory management—expecting to be informed and advised whenever defects occur.

It is not enough for management "to be in favor of accident prevention," just as it is in favor of high earnings, free enterprise and democracy. Quite differently, management's

BECAUSE hard hat softened blow from 10 lb. slab, worker escaped injury, won "Turtle Club" certificate

interest in safety must be dynamic; it must determine very definite goals to accomplish with a safety program.

Management must also see that the program continues at all times to be workable, that plant safety is at all times attainable, and that the atmosphere is created whereby workers give the necessary degree of cooperation to achieve success in accident prevention. In short, the impact of management in accident prevention must be felt.

How often have many of us visited plants within the lumber and wood

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We are not crystal ball gazers on world and national events. But of this we are sure—

In 1954 the various products of APMI will be *quality*, as always.

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products industry, observed the fine National Safety Council posters at various locations in the work area, and yet noted within a short distance a condition or situation out of which an accident could very shortly occur.

Having the office boy tack up posters on "Safety First" and "No Smoking" without the necessary program and follow-up behind it is the tipoff to the industrial worker that "the bosses aren't interested in anything but getting the work out." The germination of this kind of worker attitude can easily have repercussions far beyond the field of safety

Conversely, in the creation of a good safety program and the evidence of necessary management interest in this program, we have proven to ourselves that accident prevention can be accomplished, that the attitude of employees toward their job improves tremendously and that management-worker relations are raised to a much higher level.

It is important to charge prime responsibility for actual operation of the safety program to someone who can give it some time, who can read up on old and new accident prevention techniques, and who can work with the representatives of your insurance company in the development of your program along solid lines. Of obvious and equal importance is the selection of a man in whom management has confidence and with whom the employees will cooperate. He will be your Safety Director.

If your firm is large enough, it is well worthwhile to have this man relieved of part of his regular work assignments so that he can spend part of his day inspecting various departments of your plant in rotation. In this manner, he is able to suggest and recommend with the impartial attitude of the management consultant. In short, by giving this man a few hours each day free of other work, you have assumed into your plant a "safety consultant."

As managers, we strongly recommend that your Safety Director be given the necessary authority to do his job properly. See that he is recognized in the plant management group, and make it clear that your interest is keen and intense toward the success of the safety program with which he is charged.

Formation of a Safety Committee is another phase of the program in which management must be directly interested. Time must be made available for these production people to attend meetings as often as they are held. It is important that the safety program be introduced into the plant as a positive thing, namely accident prevention. It must be considered by all hands as a cohesive force bringing together safe workmen and safe production methods—the key to uninterrupted production, high quality and low costs.

While management can't insure plant safety by "breathing down the necks" of ten, 100 or 1,000 workers, it can clear the road for an effective safety program, energize the campaign and see that safety and accident prevention prosper in the correct company atmosphere. This is similar to the technique used by our sales departments in marketing our products, and, of course, we have a selling job to do to put over effective accident prevention.

After the program is established, it is important that your safety achievements be given recognition. The workers should be informed of these accomplishments in accident prevention. They should further know that company management is cognizant of these achievements and is pleased about them. Thus, management is even able to participate in the successes of accident prevention in such a way that both employer and employee are mutually achieving the same goal.

In the business world of today, only the field of human relations remains

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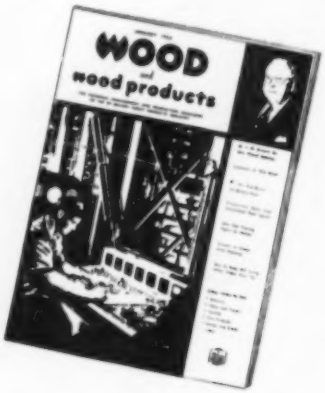

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scarcely untouched. It has been our reassuring experience that a good safety program actively administered by management and actively supported by the workers, in addition to achieving its own goal, can be a large stride forward in the continued improvement of management-worker relations.

Accident prevention in the small cabinet shop or the large sawmill requires this type of management. If you are now enjoying safety success, look ahead to future problems just as the market research section of the sales department does. If your current experience in accident prevention has been unsatisfactory, you can profit by evaluating what was done wrong and what steps must be taken at all costs to secure satisfaction in safety. If you have not incorporated a safety program, by all means start now.

To achieve accident prevention, we, as managers, must incorporate safety into our management approaches, our management ideas and our management attitudes. This will act like a stone thrown into a pool of water and the reflection action or multiplier effect will be fulfillment of our role as managers in the field of accident prevention.

The size of the safety program can be adjusted to the size of your particular business. While there is a moderate outlay for underwriting the program as you see fit to enact it, the cost is small if it results in the prevention of one serious accident. Many years of experience as a financial officer have proven to me that costs of a safety program are not an expense in the long run.

Don't let the comparative size of your business deter you from a very active program in safety and accident prevention. Casualty records show quite clearly that bad accidents involving huge sums of money can and do happen in small shops and plants. Business failure itself can be occasioned by claims resulting from a serious plant accident, and records show that small companies have about two and a half times as many injuries as large companies. Don't underestimate the value of a safety program to the healthy life of your business. Safety is good business.

While our company has substantially scratched the surface of a workable safety program, we have much yet to accomplish. We would not wish to leave the impression that our safety program is set up, the battle is won and that we can rest satisfied with those certain procedures and routines. Safety prevention is just not that kind of a business problem these days.

A word about the future of your safety program—it must not stand still, for personnel, facilities and production techniques are changing with the passing of time. Obsolescence creeps into the safety program just as it does to those other parts of your plant operation. Keep the program up to the pace of your operation.

In planning for new facilities, it is valuable to take a close look for safety hazards. You might be surprised to know that accident prevention can begin on the architect's drawing board. Keep this idea in mind. When in reinvesting funds into your business you have the opportunity of securing additional returns if you plan for safety, too.

Safety programs are in force in all phases of Edward Hines Lumber Co. operations, whether in the forest, sawmill, lumber yard, millwork operations or building products warehouse. Accident prevention has conserved the earnings of our company and allowed us to strengthen and extend our corporate life. In fact, accident prevention is a tool of management, and we have been very much encouraged by what it has done for us.

SPEED UP PRODUCTION --CUT COSTS with NASH AUTOMATIC SANDERS

No. 50 Automatic Turning Sander

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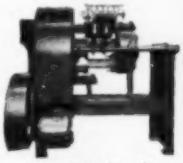

No. 79 Novelty Turning Sander

No. 83 Inner Contour Sander

No. 53, 30-Degree Round Stock Sander

IF IT'S TURNED, A NASH CAN SAND IT

"Standard of the World" since 1890, Nash Sanders lead in sturdy dependability and cost-cutting efficiency. They are designed to do the job right on any type of turning, any type of wood. Whether it is one of the items pictured or something entirely new... there is a Nash for the job.

WRITE for detailed information, and send sample of stock for demonstration. Beaded Turning Sanders, Spool and Bobbin Sanders, and other special machines.

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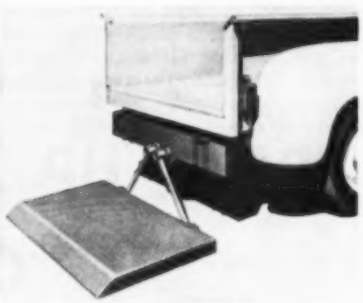
NEW and IMPROVED PRODUCTS

New Type Facing Planer

Baxter D. Whitney & Son, Inc., Dept. WP, Winchendon, Mass., has added a new facing planer to its line of planers and shapers. Called the 600 New-Matic Facer, it fills a need for a heavy duty facing planer for rough cut lumber to remove the warp or crookedness preparatory to surfacing or to remove the glue and unevenness from built-up cores or panels to surfacing.

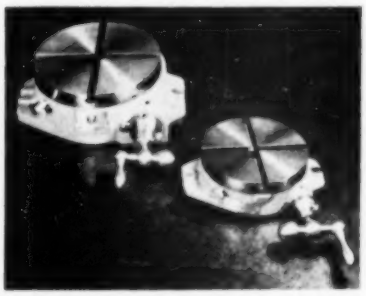
The facing planer is built in 24 and 36 in. widths, and its stock feeding mechanism consists of a specially constructed rubber fabric endless belt with pneumatic rubber feed fingers mounted in replaceable sections on the belt. Pneumatic action of these fingers yields to irregularities of stock, but assures a firm, positive feed without straining or distorting the lumber.



Hydraulic Lift Tail Gate

A new hydraulic lift tail gate, called the Master Loader, has been introduced by the Automotive Division, Dept. WP, Master Vibrator Co., Box 657, Dayton 1, Ohio. For ½, ¾ and 1 ton trucks of pick-up, stake or platform body styles, the loader has a capacity of 1000 lb. and can handle loads which ordinarily require the services of two men.

Its low pressure hydraulic operating system is initially powered by the truck battery. The compact power unit is attached to the truck chassis by four "U" bolts supplied with the unit. Installation is completed by connecting power cable to the truck battery and fastening the control station to rear of truck bed or body.

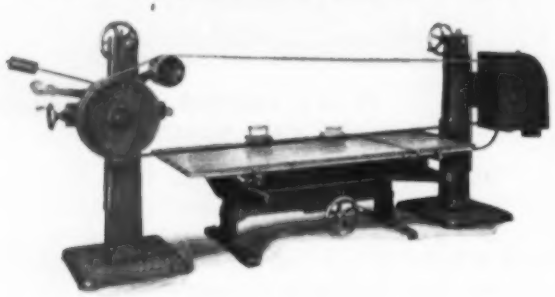


New Rotary Table

A new 8 in. rotary table is added to the 6 in. line produced by Benchmaster Mfg. Co., Dept. WP, 1935 W. Rosecrans Ave., Gardena, Calif. Both

"OLIVER" SANDERS

No. 183D Reversible Belt Sander is excellent for flat work, built-up pieces and mouldings



Has unlimited usefulness. With pulleys up it's a Flat Sander, with pulleys down, a Moulding Sander. Direction of belt travel reversed by safety switch. Sands flat and irregular surfaces and built-up pieces up to 44" high. Takes work of any practical length, and sands to center of 66". Also sands line and edge mouldings. Three units easily aligned. Driving pulley mounted on motor shaft. Write for Bulletin No. 183-D.

"Oliver" makes an extensive line of of Scroll Edge, Vertical and Double End Drum, and Belt Sanders.

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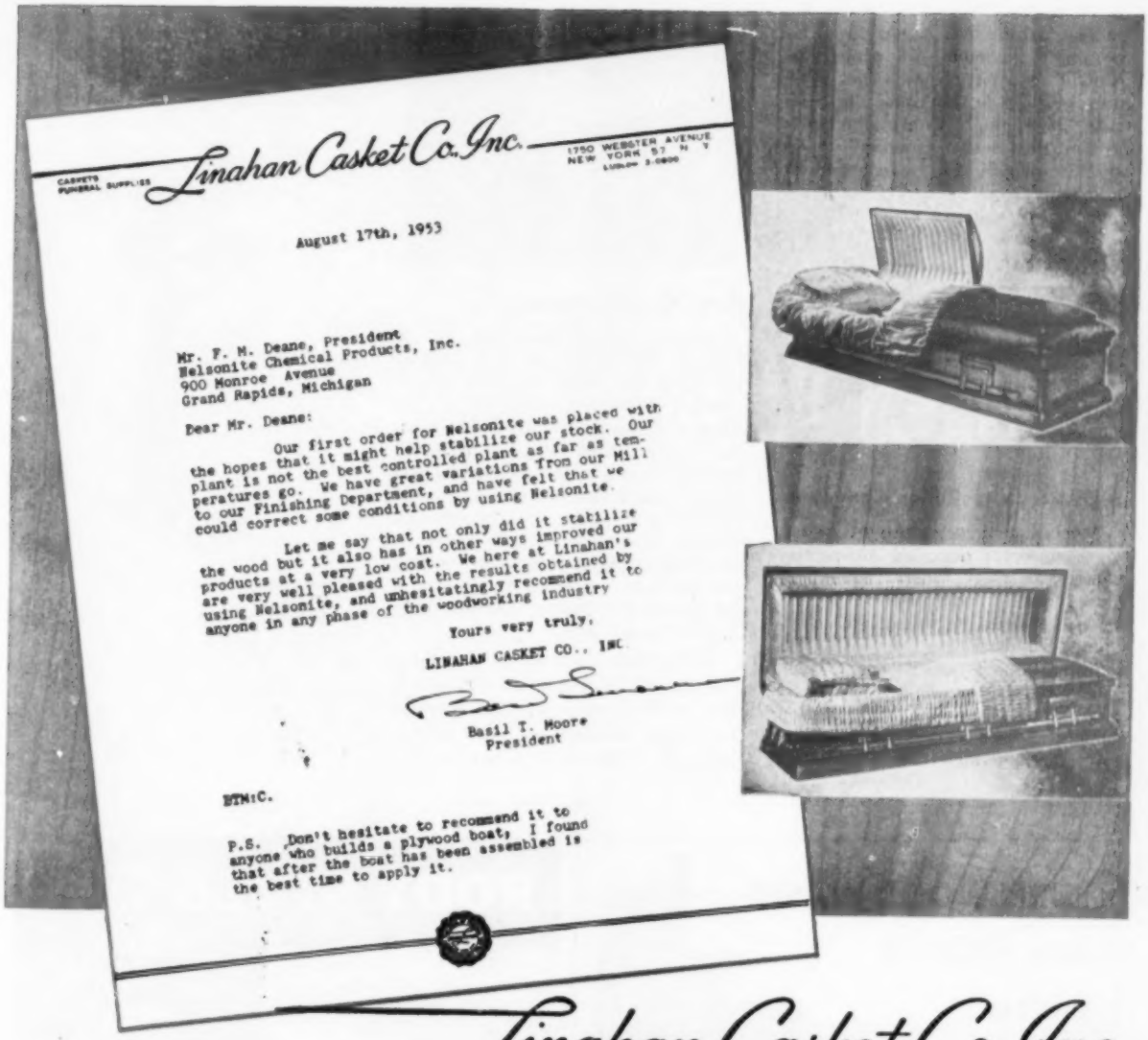
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Nelsonite Chemical Products, Inc.
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Let me say that not only did it stabilize the wood but it also has in other ways improved our products at a very low cost. We here at Linahan's are very well pleased with the results obtained by using Nelsonite, and unhesitatingly recommend it to anyone in any phase of the woodworking industry
Yours very truly,
LINAHAN CASKET CO., INC.
Basil T. Moore
President
BTM:C.
P.S. Don't hesitate to recommend it to anyone who builds a plywood boat; I found that after the boat has been assembled is the best time to apply it.

Linahan Casket Co., Inc.

NELSONIZES Caskets

FOR WOOD STABILIZATION AND LONGER LIFE AT **Low Cost**

MORE AND MORE MANUFACTURERS ARE NELSONIZING THEIR PRODUCTS

1. **Guards against checking, splitting, swelling and warping**
2. **Gives their sales departments an extra sales aid in a buyer's market**
3. **Reduces the three r's—rejects, repairs and reworks**
4. **Reduces costs and increases efficiency**

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Please send us sample to meet our individual specifications, and suggested tests for us to make, at no charge.

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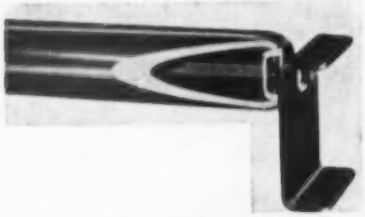
models feature low height in order to permit maximum use of vertical machine capacity, the 8 in. table measuring 3⅝ in. high and the 6 in. table 2⅛ in. high. Construction features a steel worm mounted on an eccentric which can be engaged or disengaged from gear to permit free-wheeling of table.



High Capacity Roller Conveyor

A new line of rugged-duty Rapistan roller conveyor designed for permanent installation where equipment must stand up under heavy or impact loads is now being manufactured by Rapids-Standard Co., Dept. WP, 342 Rapistan Bldg., Grand Rapids 2, Mich. Called the 1.9 series, the line offers a choice of 154 new straight section models and 38 curves for handling many kinds of materials.

New Hinged Clamps

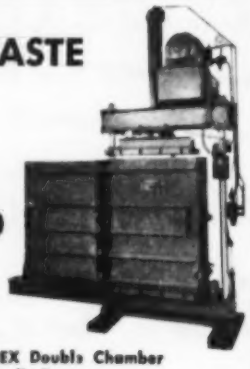
A new type of clamping "jig" is now on the market in four designs, providing for a reach of 2 to 5 in. and opening capacities of 6 to 30 in. Known as "Jorgensen" hinged clamps, they are provided with a hinge-plate on the foot end by means of which the clamps can be mounted onto any flat surface. The hinge-action permits the clamps to be positioned either in clamping position or out of the way but ready for instant use on the job. No time is lost putting down or picking up "loose" clamps.

For production work, one or more clamps can be mounted as required. Positive final screw pressure provides for ample take-up, and the sliding-head part of the clamp adjusts instantly, holds securely, any place on the bar. Manufactured by Adjustable Clamp Co., Dept. W-417, N. Ashland Ave., Chicago 22.

New Box Stitcher

A new box stitcher, the N-5 Acme-Morrison, is now being manufactured in five different types—the post, arm, combination post and arm, side seam, and top—by the Acme Steel Co., Dept. WP, 2840 Archer Ave., Chicago 8. All types of corrugated and solid fibre

TURN WOOD WASTE into PROFITS with a CONSOLIDATED Baling Press



Package and sell shavings, fibers and chips to paper mills — hardboard and molded product makers — poultry and dairy farmers — nurserymen and florists — others.

DUPLEX Double Chamber Hydraulic Press

Loads & Compresses Simultaneously

- The DUPLEX will produce over 35 bales (100 lb. each) per hour.
- These bales are small and dense for lowest shipping and handling costs.
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Proper packaging means baling to insure uniformity of material and low costs. CONSOLIDATED hydraulic baling presses give you speedy, low-cost baling of your shavings, fibers and chips, converting waste products into extra income. There is a CONSOLIDATED press to fit your needs.

Write for full details and catalog.

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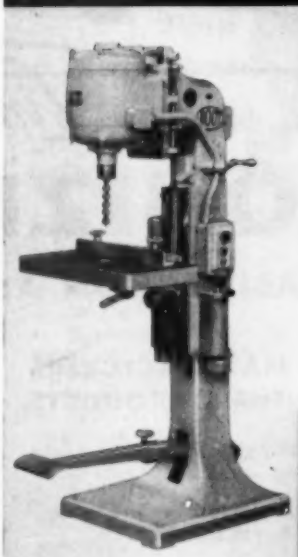
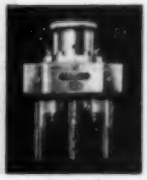
400-404 Third Avenue Brooklyn 15, New York

ROOT STYLE GM BORER OF MANY USES



- Single Bores
- Mortise Cuts
- Multiple Bores with Cluster Heads
- Power Feed
- Foot Feed
- Many other surprising and interesting features. Write for details.



Root Style GM as single borer.

Typical Cluster Head

Mortise Chisel Unit

B. M. ROOT CO. YORK, PA.

FORDYCE

HARDWOODS

Band Sawn Stock
Red and White Oak
Red and Sap Gum
Industrial and Wagon Oak

•

Ash Hickory Cypress Elm

•

Furniture Semi-dimension
Thresholds
Solid and Glued-up Treads

•

Uniform high standards in manufacture, drying and seasoning.

Play Safe . . . Buy Brands You Know!

FORDYCE LUMBER COMPANY
FORDYCE, ARKANSAS

Since 1889

boxes can be stitched quickly and securely at low cost on this machine which can be adjusted to handle work thicknesses from 1/16 in. to 3/4 in.

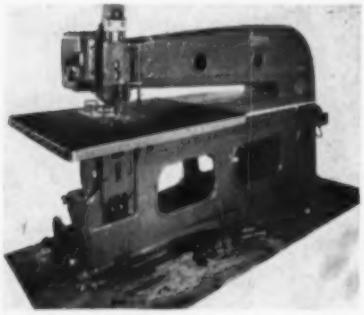
In operation, the new stitcher draws flat wire from a coil, puts an arc in the wire, cuts it to proper length, forms it into a stitch, drives the stitch through the material and clinches it.

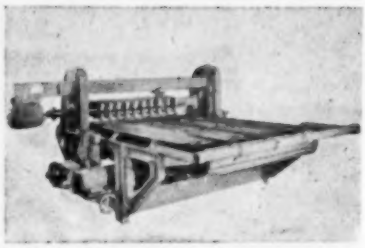
Knot Borer, Veneer Patcher

The Raimann knot boring and plugging machine and the Raimann veneer patching machine, designed to attain maximum area salvage of lumber in furniture and remanufacturing plants, are now available from E. V. Prentice Co., Dept. WP, 2303 N. Randolph St., Portland 12, Ore.

Operation of the Raimann knot boring and plugging machine requires only 4 seconds and is completed in one single automatic action by the simple touch of a foot pedal. A bit bores out knots and retracts automatically; blower removes chip; glue is sprayed on side and bottom of hole by injector. Carriage moves and a plug is cut from lath in magazine and driven in hole.

The veneer unit operates on same general principle and requires only 2 seconds for its single, automatic foot pedal operation.





Machine for Drawer Fronts

A new machine is now offered for multiple ripping, cross cutting and grooving of furniture case goods parts by Mereen-Johnson Machine Co., Dept. WP, Minneapolis 12, Minn. Known as the No. 435-H slat bed machine, it is a variation of the No. 435-H cut-off saw line and can produce practically any number of drawer fronts in one pass of a large panel through the machine.

The machine also handles such sheet material as plywood and hardboard, cutting it into accurate squares. An important feature is the possibility of very close spacing of the saws. It can be arranged for use with either solid or split in half saw blades.

New Furniture Hardware

New protective finishes in metal

standard pattern
cutters
or made to order

Onsrud offers a wide variety of high speed steel and carbide tipped cutters in standard patterns, designed to meet the most common requirements, priced low, and available now.

For special needs, Onsrud Cutters may be made to your exact specifications and "Comparator Checked" to assure accuracy of profile.

Our 72 page illustrated catalog gives prices and specifications on hundreds of "stock" items . . . and a formula by which you can estimate "specials" yourself! You should keep this catalog handy for reference when buying cutters or planning your work. Send for it today.

Onsrud Cutter Manufacturing Co.
802-22 E. Broadway Libertyville, Illinois

To Get Finer Plywood, Specify . . .
Permawood
HARDWOOD PLYWOOD

Our 35 years successful experience, a top-grade management-skilled worker team, and use of the latest-type machinery and methods, has kept the quality of our product far above that of the average plywood. We offer it at competitive prices; and you're getting a finer value when you specify PERMAWOOD Hardwood Plywood.

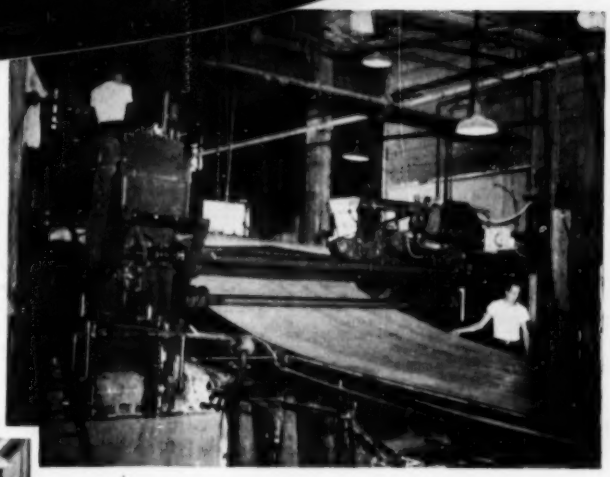
A Hot-Plate Press in closed position. Skilled workmen exercise every care to insure that PERMAWOOD Hardwood Plywood is properly glued.

PERMAWOOD panels are made in Standard Sizes. Thicknesses in All Veneer construction from 3/20" to 1 1/16", and Lumber Core construction in 3/4" and 13/16". Widths from 30" to 48"; lengths from 36" to 96". Write for latest stock lists and prices.

DARLINGTON VENEER CO., INC.
Established in 1918
DARLINGTON, SOUTH CAROLINA

Production ...GROWS WITH COES

Coe machines are designed and built to withstand the stresses of continuous high production. They have a wide range of increased capacity that can be utilized without any sacrifice in efficiency. Furthermore, in adapting them into plant layouts Coe engineers always endeavor to anticipate increased production demands and to provide a practical means of meeting them in the future.



View of discharge side of high production Model 244 veneer lathe with roller nose bar and hydraulic spindles.

View of grading table on discharge side of two Model 330 automatic veneer clippers.

View of discharge side of Model 48 roller veneer dryer which is capable of increase in capacity through the installation of additional sections.

The COE MFG. Company
PAINESVILLE, OHIO

LATHES • CLIPPERS • DRYERS • KNIFE GRINDERS

furniture hardware that resists marring, scratching and discoloration from tarnishing is now available from Faultless Furniture Hardware Division, Dept. WP, of Faultless Caster Corp., Evansville, Ind. The new organic hardware finish is applied after a special plating process. It is available in many smart designs which retain their beauty and lustrous finish for years with normal care.

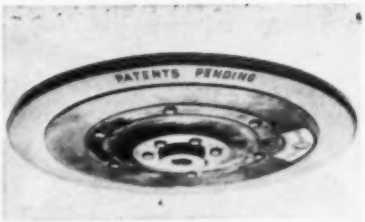
New Plywood Siding Panel

Western fir plywood manufacturers now offer a high style outdoor building panel made with 100% waterproof glue for use in siding all types of homes, offices, shops and other commercial buildings. Called Texture One-Eleven, the new panel is marked by deep parallel grooves and the textured surface has a slightly rough face with natural wood markings of grain,

small knots and restricted knot holes. Detailed data and sources can be obtained from Douglas Fir Plywood Association, Dept. WP, Tacoma 2, Wash.

Leather Back-Up Pad

A new back-up pad for portable rotary disc sanders, called Multi-Flex

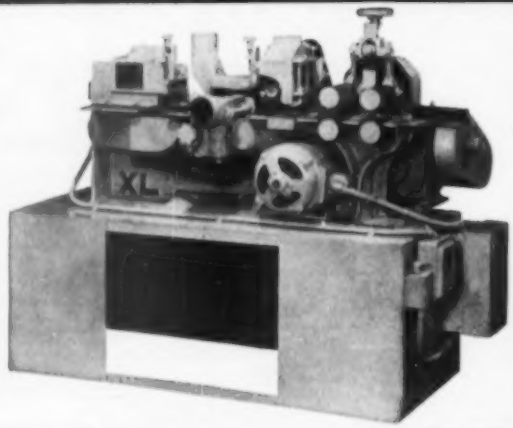


pad and made of leather, has been developed by Alexander Brothers Belting Co., Dept. WP, 406 N. 3rd St., Philadelphia 23, Pa. Flexibility is controlled in the leather itself, in arrangement of metal backing plates and in beveling or contouring the pad. Speedy production and cutting action, long wear and safety are features.

New Quick Setting Glue

A new Weldwood glue, named Presto-Set because of its quick setting properties, is being offered by U. S. Plywood Corporation which has more than 50 distributing units in the U. S. and headquarters at the Weldwood Building, 55 W. 44th St., New York 36, N. Y. The new glue sets—ready for machining—in 30 minutes for soft woods and somewhat longer for hard woods and begins to gain maximum strength in 24 hours.

XL MOLDMATCHER



EASY TO OPERATE • EASY TO BUY

Here is a high speed 4-side wood moulder which you can buy for little more than the price of a good shaper. Priced right for even the smallest shops. A money maker in any shop, speeds 6000 RPM. Feed speeds from 10-80 FPM. Capacities to 2" x 6". Note the simple rugged construction and built-in dependability. Don't let an old slow speed slicker or a cumbersome shaper operation steal your profits. Tell us your job and we will show you how to run it for a profit on an XL MOLDMATCHER.

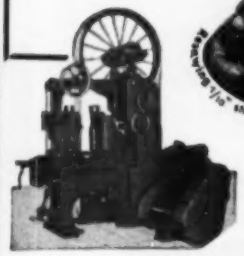
Dealers in All Major Cities

SMITHWAY MACHINE CO.
4617 AIRPORT WAY • SEATTLE, WASH.

Resaw 1/10" Strips with the . . .

McDONOUGH 44"
VERTICAL BAND RESAW

- Independently adjusted feed rolls
- Exclusive gear type transmission
- Accurately balanced wheels
- Knife-edge sensitive type saw strain
- Electro-filmed feed roll gears and shaft
- And many more proven design features!



Anson-Gilkey Co. of Merrill, Wisconsin, needed a high-speed resaw that would cut 1/10" strips, with precision accuracy and minimum kerf wastage. They specified a McDonough 44" Vertical Band Resaw . . . and got exactly what they needed!

For more than sixty years, users the world over have found that for speed, accuracy and versatility, McDonough Band Resaws cannot be equalled.

For gauge, center, bevel or rip sawing of stock up to 12" wide and to a maximum depth of 25" . . . for greater dependability and top performance—Specify a McDONOUGH 44" VERTICAL BAND RESAW!

Write for Complete Information, TODAY!

McDONOUGH MANUFACTURING CO.
WORLD'S LARGEST PRODUCER OF BAND RESAWS
1504 Galloway Eau Claire, Wis.

WHAT DOES FIRTH STERLING OFFER YOU?

(ANSWER NUMBER 4)

RESEARCH THAT ANTICIPATES TOMORROW'S NEEDS

Our objective is to help *you* solve the technical and metallurgical problems of an *atomic* age *before* they arise . . . not *after*. So, at Firth Sterling, constant emphasis is on full-scale research, development, and production in specialty steels, carbides, new metals, and new methods.

Out of this determination to be ahead, not just abreast of need, has come this amazing three year record of achievement in *your* interest:

- A method of heat tinting that makes *Color Metallography* practical for determining the exact structure-property relationship of carbide mixtures.*
- New metals of great present and future potential that include heavy metal, three grades of chromium carbide, titanium carbide, and high temperature alloys.
- Cermets—those amazing hybrids of ceramic and metal, possessing in *combination* the best characteristics of each, to overcome modern technological problems.
- Zirconium—in ingot, billet, bar, rod, strip, sheet, wire, and tubing form—soon to be available for industrial applications.
- A new chemical plant, employing the most advanced processes and equipment, producing ammonium paratungstate of the highest *purity* to improve the quality of our tungsten carbides.
- Method "X"—an electro-mechanical process for machining metals that are unmachinable by conventional means.

Yes, all these are the result of "accent on research" . . . the justification for our statement

Firth Sterling Stands for Metallurgical Achievement—Past, Present, Future

*Write for reprint of article from Oct. 19, 1953 issue of STEEL.

I-4

from your tool maker . . .

FIRTHITE TIPPED TOOLS FOR EVERY WOODWORKING NEED

A typical shaper cutter tipped with FIRTHITE Tungsten Carbide. Special shapes to meet any requirements made to specifications by your tool maker.

Firthite tips for circular saws are available in standard sizes to meet all requirements of the woodworking industry.

Firthite cutting edges for knives are furnished to the tool maker in grades and shapes to meet individual requirements.

Firthite cutting edges for unusual or special applications may be ground-to-pattern as required.

Firthite solid carbide knives and knife blanks are furnished to the tool manufacturer ready for finished grinding.

Consult your tool manufacturer . . . your regular source of supply, or ask a Firth Sterling representative for further information and tooling recommendations.

P-6

Firth Sterling

—INC—

GENERAL OFFICES: 3113 FORBES ST., PITTSBURGH 30, PA.

OFFICES* AND WAREHOUSES: BIRMINGHAM* CHICAGO CLEVELAND DAYTON* DETROIT HARTFORD HOUSTON* LOS ANGELES NEW YORK* PHILADELPHIA* PITTSBURGH* WASHINGTON* WESTFIELD, N.J.*

PRODUCTS OF FIRTH STERLING METALLURGY

High Speed Steels
Tool & Die Steels
Stainless Specialties
High Temperature Alloys
Sintered Tungsten Carbides
Firth Heavy Metal
Chromium Carbides
High Temperature Cermets

NEW CATALOGS and LITERATURE

Wood Hog and Shredder Bulletin

A four-page illustrated bulletin telling how the Gruendler Wood Hog and Shredder reduces wood refuse, blocks and shavings to any desired size in one operation is available from the Gruendler Patent Crusher & Pulverizer Co., Dept. WP, 2915-17 N. Market St., St. Louis 6, Mo. The shredder can be used for production of chips from the chipper for extraction of wood alcohol, turpentine or other juices.

Drum Shapesander Folder

A new four-page folder has been issued by Timesavers, Inc., Dept. WP, Box L, Robbinsdale 22, Minn., describing the features of its Model O-24 oscillating drum shapesander. The sander is used for production sanding on all types of curved, serpentine, tapered and straight wood stock.

The illustrated folder describes capacities, speeds, dimensions, motors and other data on all five models of shapesander now being manufactured, plus construction features such as the magic touch feed roll and instant reversing switch.

Fin Radiation Bulletin

A new two-page bulletin, No. 5308, featuring Moore-Fin radiation which has extensive application in dry kiln heating systems as well as other modern heating and cooling applications, is available from Moore Dry Kiln Co., Dept. WP, Jacksonville 1, Fla. Uses and efficiency of steel finned spiral coils in close contact with pipe for greater radiation is explained.

Vaneaxial Blower Bulletin

Direct-drive vaneaxial blowers, three types of belt-drive vaneaxial blowers and a portable blower for exhausting fumes from tanks are described in a new bulletin issued by the Hartzell Propeller Fan Co., Dept. WP, Piqua, Ohio. The 16-page bulletin (A-110) includes dimension drawings and figures and complete air delivery tables for all blowers.

Silicon Carbide Brochure

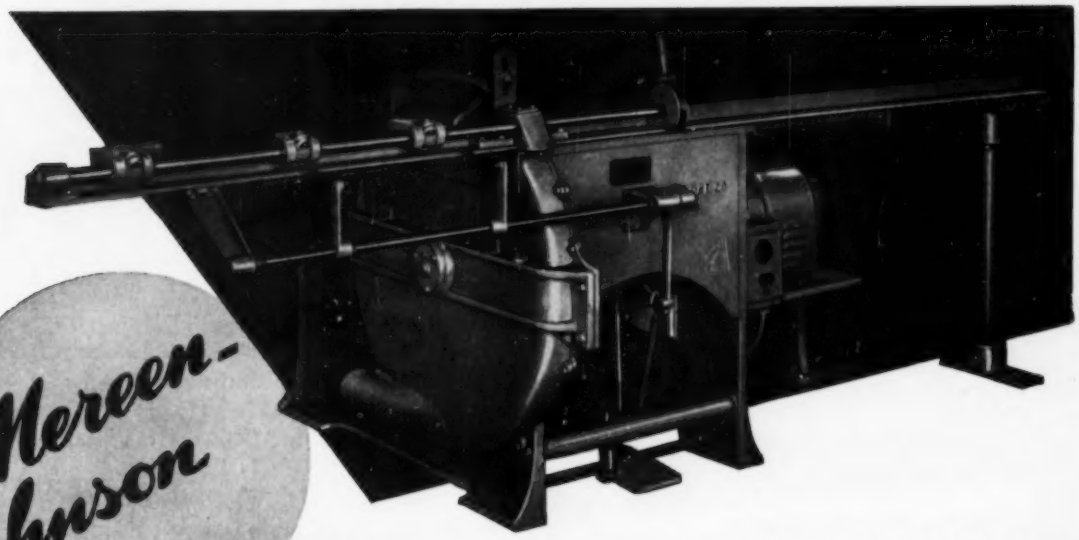
A 52-page brochure describing the properties of silicon carbide, its applications as an abrasive and outlining manufacturing techniques can be obtained from The Carborundum Co., Dept. WP Public Relations, Niagara Falls, N. Y. Use of silicon carbide as loose grain and in the form of bonded and coated abrasive products is fully explained.

Material Handling Booklets

Copies of the first three booklets in the "Library of Know-How" are available from the Material Handling Institute, 813 Clark Bldg., Pittsburgh 22, Pa. There is no charge to professors and students, all others pay 50¢ a copy.

Booklet No. 1 presents a comprehensive picture of scientific material handling, its possibilities, tools and techniques. Booklet No. 2 lists 32 principles, outlines methods of analyzing handling problems and shows how

READY TO USE!
SETS SO FAST!
BONDS LIKE MAGIC!
Weldwood PRESTO-SET GLUE
READY TO USE - SETS FAST
FOR USE ON wood, paper, fabrics and other porous materials
UNITED STATES PLYWOOD CORPORATION
the GREATEST SUCCESS IN GLUE HISTORY! Orders pouring in!
...yet this magical white liquid glue was introduced only last month!
In 1 gallon jars and 5, 10, 30 and 55 gallon drums. At any of our 64 convenient warehouses coast to coast, or from your mill supply dealer or industrial distributor. Also packed in over-the-counter sizes.
UNITED STATES PLYWOOD CORPORATION
Dept. 44, 55 West 44th St., N.Y. 36, N.Y.
We would like to test your new Weldwood* Presto-Set* Glue. Please send generous test sample free.
Name
Firm
Address
*Trade Marks
HAVE YOU MADE YOUR TEST YET?



Mereen-Johnson

AUTOMATIC CUT-OFF SAWS

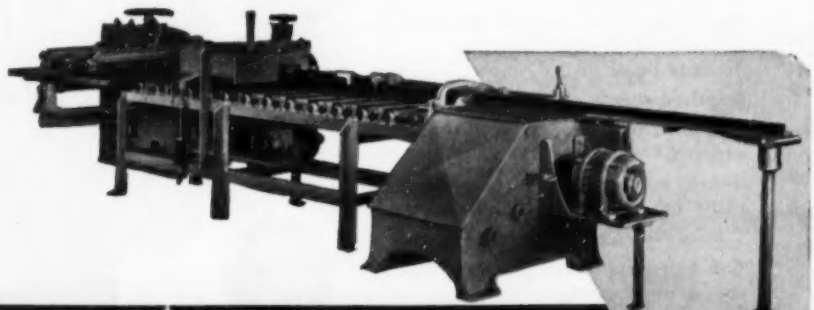
The greater your production . . . The greater the saving

- **Ideal for any production cross-cutting operation.**
- **Fewer machines save floor space, power, labor**
- **Includes new retracting stock support**

THESE MACHINES have a capacity equal to two or three swing, straight line or roller carriage cut-off saws—depending on the condition of the stock. They are particularly efficient wherever short lengths are cut from long boards in quantity production. Two saws, mounted opposite from each other on a revolving yoke, make alternate cuts. Each saw disappears beneath the table as it cuts. The operator never has to wait for the saw to return to the back position, as is the case with an ordinary reciprocating type of machine. The stop lever at the operator's left hand leaves the right hand free to handle the stock. *Available in two models: No. 477, 17" wide. No. 478, 23½" wide.*

COMBINATION UNIT

Automatic cut-off saw, gang rip saw and automatic hopper feed for gang rip saw. The stock leaving the cut-off saw drops onto the bed of the automatic feeder. This in turn feeds into the rip saw—eliminating the off bearer of the cut-off saw and feeder of the gang rip saw. Note the saving of two men in this operation.



Mereen-Johnson MACHINE COMPANY

4401 LYNDALE AVENUE NORTH · MINNEAPOLIS 12, MINNESOTA

to compute costs and savings accurately. Booklet No. 3 explains the proper relationship between material handling and other departments in an industrial organization and presents general rules for analyzing work volume and work density.

Steel Strapping Publication

A recently issued quarterly publication, Confab, carrying illustrated descriptions of the latest cost-saving applications of steel strapping and wire stitching, is available from Acme Steel Co., Dept. WP, 2840 Archer Ave. Chicago 8. A feature article tells how a logging firm bundles logs together with steel strapping to cut handling and transportation costs.

Edge Gluing Machine Bulletin

A new bulletin is available from James L. Taylor Mfg. Co., Dept. WP, 116 Parker Ave., Poughkeepsie, N. Y., describing the operation of a one-man hydraulic batch press. Called the Taylor Panel-Mint Press, the edge gluing machine automatically handles stock up to seven feet long, 54 in. wide and two in. thick in front lay-up. Also described is the machine's side loading and unloading by hand capabilities.

NAMES and EVENTS

Nat'l FPRS Meeting Plans Laid

Among those in recent attendance at Grand Rapids, Mich. to discuss plans for the forthcoming 1954 national meeting of the Forest Products Research Society were Dr. J. Alfred Hall, North Central regional board member; Frank J. Rovsek, executive secretary, and Robert N. Smith, FPRS office.

national meeting outlined the events

Fred Dickinson, chairman of the '54 scheduled and the general program for the three-day meeting to be held at Grand Rapids on the 5th, 6th and 7th of May.

Assisting Dickinson are the following steering committee chairmen:

Steve Pryce, John Widdicomb Co., Grand Rapids, chairman of hotel arrangements and rooms.

Steve Preston, University of Michigan, Ann Arbor, chairman of finance and budget.

George Herrity, Denman Lumber Co., Grand Rapids, publicity chairman.

Helen Gleason, chairman of ladies events.

The Pantlind Hotel will be FPRS headquarters with 350 rooms reserved.

SHOWN ABOVE scheduling events for the forthcoming FPRS National Meeting May 5-7 at Grand Rapids, Mich. are: seated, Fred Dickinson, University of Michigan, Ann Arbor, chairman; and his steering committee, standing left to right, S. D. Pryce of John Widdicomb Co., Grand Rapids, general arrangements chairman; S. B. Preston, University of Michigan, finance and budget chairman; and George Herrity of Denman Lumber Co., Grand Rapids, publicity chairman

The tentative schedule of events:

Tues., May 4

P. M. —Registration in lobby of the Pantlind Hotel.

Evening—Meeting of the Education

HANCHETT

AUTOMATIC

circular saw sharpener

FOR RIP AND CROSSCUT

CIRCULAR SAWS

MODEL 948

Highly recommended for smooth trim saws.

Full range of bevel grind on cross cut teeth from slight bevel to extreme bevel of 50°.

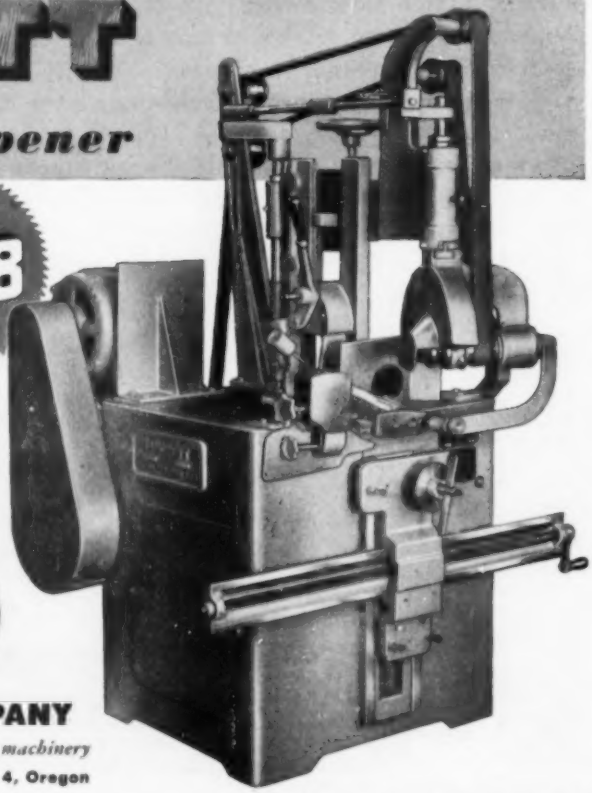
Standard speeds 32 teeth per minute.

Equipped for faster or slower speed when ordered.

Totally enclosed feed mechanism with many other exclusive features.

Capacity 8" to 48" diameter saws.

Can be equipped for grinding inserted tooth cut-off saws.



HANCHETT MANUFACTURING COMPANY

World's largest manufacturer of knife grinding and saw sharpening machinery

MAIN OFFICE — Big Rapids, Michigan WEST COAST — Portland 4, Oregon

WHELAND AIR-OPERATED CARRIAGE AT DACUS LUMBER CO. WEST MEMPHIS, ARK.

THIS WHELAND AIR-OPERATED CARRIAGE

Increased Production 15%

SLASHED COSTS *at the same time!*

Dacus Lumber Company

MANUFACTURERS
SOUTHERN HARDWOODS
LOCAL PHONES 61, 62, 63
MEMPHIS PHONE 5-1426

West Memphis, Ark.
August 21, 1953

The Wheland Company
Chattanooga, Tennessee

Gentlemen:

Two years ago, we installed one of your 52" Heavy Duty Air Carriages at our plant in West Memphis, Arkansas. We have had very good service from this Wheland Carriage. It has helped increase our mill cut up to 15% due partly to more rapid dogging and accurate setting.

This Carriage has materially decreased our maintenance costs so that they are now the lowest operating costs we have experienced in several years.

We have found the Trout setworks exact, the air dogs fast, the air tapers adequate and the frame and trucks strong and rugged.

If we were to again need a carriage, we feel that a Wheland Air Carriage would be our choice.

Yours very truly,

DACUS LUMBER COMPANY

P. M. Dacus

WHELAND *AIR-OPERATED* CARRIAGE EQUIPMENT CAN DO THE SAME FOR YOUR MILL!

An experienced Wheland representative is available to study your operation and show you how Wheland Air-Operated Carriage Equipment can help your mill produce better lumber faster for less money. No cost or obligation on your part.

PHONE CHATTANOOGA 5-3181 or WRITE:

The WHELAND COMPANY

CHATTANOOGA 1, TENNESSEE

COMPLETE SAWMILLS AND AUXILIARY MACHINERY • CIRCULAR SAWMILLS—HEAVY, PORTABLE BAND SAWMILLS • EDGERS AND TRIMMERS • TRANSMISSION AND CONVEYOR MACHINERY

FOR OVER 80 YEARS . . . THE FOREMOST NAME IN SAWMILL EQUIPMENT

TRADE WHELAND MARK

Committee. Welcoming reception.

Wed., May 5

All day —Meetings of FPRS subject matter committees.
Registration in Civic Auditorium.
Plant tours.
Woodworkers' Industry Show.

Thurs., May 6

A. M. —Authors' breakfast.
Two technical sessions.

Noon —Advisory Committee–Executive Board luncheon.
Two technical sessions.

Evening—Paul Bunyan hour—Reception and FPRS "party."

Fri., May 7

A. M. —Authors' breakfast.
Two technical sessions.

Noon —Official luncheon and business meeting.

P. M. —Two technical sessions.

The technical sessions as announced by the program chairman, Lester J. Carr, Sacramento, Calif. are: May 6th, I Packaging, II Wood Composition Board, III Wood Machining, IV Wood Drying. May 7th, V Glues & Gluing, VI General, VII Wood Finishing, VIII Quality Control.

LEFT TO RIGHT—Alexander H. Stuart of John Widdicomb Co., Robert Hiller, American Cyanamid Co., and Walter Hagstrom, Mattison Machine Works. They are, respectively, president, vice-president and treasurer, and advertising adviser of Hiller & Stuart Co., sponsors of the Machinery Show to be held May 5-7 at Grand Rapids, Mich. More than 100 exhibitors are expected to participate. Running concurrently will be the 1954 National FPRS Meeting

College Scholarships Awarded Four 4H Woodlot Foresters

College scholarships have been awarded four 4-H Club boys from Arkansas, Connecticut, Ohio and Wisconsin for their demonstrated ability to manage a family farm woodlot just a bit better than hundreds of others also engaged in the annual competition.

The scholarships, plus free trips to the recent National 4-H Congress in Chicago, were given Delmar Tyree, Prescott, Ark., John E. Hibbard, East Woodstock, Conn., Anthony Gwirtz, Shelby, O., and Lynn Lowman, Augusta, Wis. Eight other state winners, including one girl, also received free trips sponsored by wood using industries near their home.

This marked the sixth year forestry scholarships have been donated by American Forest Products Industries, Inc., national spokesman for the wood using and allied industries. Objective is to emphasize the value of the farm woodlot as a source of income, to encourage good forestry practices and teach the need for keeping America green by preventing forest fires.

Lumber, Millwork to be Shown

A new and interesting feature of the National Association of Home Builders big anniversary exposition Jan. 17-21 in Chicago will be a special exhibit area in the Sherman Hotel devoted to lumber and millwork.

Participating in the showing are 24 leading manufacturers and allied trade associations. Associations include the Ponderosa Pine Woodwork Associa-

JUST ADDED:

4 MORE DRY KILNS. Our Capacity now 1¼ Million Bd. Ft. per Charge.

WINTER'S HERE . . Loggers are Coming Out of Woods . . . **BUT WE NEVER STOP MANUFACTURING** Ponderosa and Sugar Pine from our own large resources . . top quality kiln-dried interior trim, jambs, frames, incense cedar venetian blind slats, glued-up panels, cut stock, box shook . . .

WHAT YOU WANT, WHEN YOU WANT IT. RALPH L. SMITH IS YOUR DEPENDABLE SOURCE OF SUPPLY.

Mixed Cars to the Trade, Our Specialty

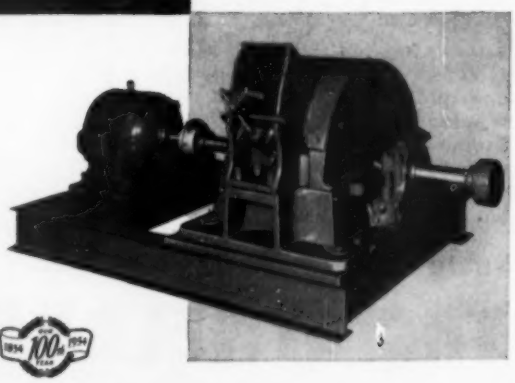
The Ralph L. SMITH Lumber Company

Mills at Anderson and Castella

Sales Office at Anderson, California

SUGAR PINE . . . . PONDEROSA PINE . . . . DOUGLAS FIR
WHITE FIR . . . . INCENSE CEDAR

M&M WOOD HOGS



M & M Wood Hogs are built in many types and sizes to reduce slabs, edgings, blocks, veneer, bark and other waste to usable size chips. Write us for further information about M & M equipment, and how it can help with your wood disposal problem.

MITTS & MERRILL

1018 South Water • SAGINAW, MICHIGAN. 80

206 Double Spindle Shaper

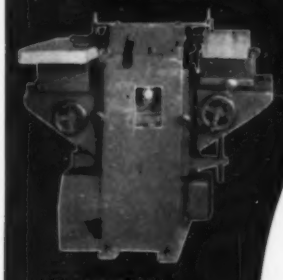
405 Surfacer

612 Router

PORTER machinery...

DIVIDEND DESIGNED

to give you more production per dollar

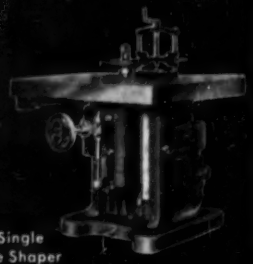

155 Serpentine Shaper

300 Jointer

Straight Line and Compound Angular Cut-Off Saws

Your cost per job is less with Porter DIVIDEND DESIGNED machinery. Porter machines are faster, take heavier cuts and require less adjusting. You'll find an extra margin of speed, capacity and strength not found in ordinary machines. When you need a Router, Saw, Shaper, Planer, Carver, Jointer, Surfacer or Serpentine Shaper investigate Porter, the machinery designed for greater dividends.

105 Single Spindle Shaper


203 Single Spindle Shaper

700 Surfacemaster Facing Planer

Hydracut Saw

C. O. Porter
Machinery Company
660 Front St., N.W.
Grand Rapids, Michigan

tion, National Woodwork Mfrs. Association, West Coast Lumberman's Association, Western Pine Association and the Fir Door Institute. Complete technical information will be available, as well as the latest product offerings of the manufacturer.

Group Studies Hardwood Supply

Representatives of the furniture industry in North Carolina have established a furniture and veneer council of the North Carolina Forestry Association aimed at focussing attention on the need to conserve and develop hardwood lumber resources. Heading the council is Ralph Edwards of Henredon Furniture Co. Industries, Inc., Morgantown, N. C. James Broyhill of Broyhill Furniture Industries, Lenoir, N. C. chairmans a seven-man membership committee, and Jerry Liebhart of Drexel Furniture Co., Drexel, N. C. heads a research committee.

Furniture Executives Meet

Nationally known industrial experts addressed the 40 furniture executives who attended the first annual Production and Industrial Relations conference Nov. 10-11 at State University of New York College of Forestry, Syracuse. Among speakers were Ed Maisel, director of National Retail Furniture Association, L. J. Seidman of Seidman and Seidman, Frank K. Welch of Carrier Corp., D. L. Clark, marketing research manager of General Electric Co., and Lloyd R. Norris, National Association of Furniture Manufacturers.

Indiana Lumbermen to Meet

The Indiana Hardwood Lumbermen's Association will hold its 36th annual meeting Jan. 29 at the Hotel Severin, Indianapolis. General meeting will convene at 1:15 p.m., with the banquet at 6:45, according to Roy C. Brundage, secretary.

Favor Buying Wood by Weight

Advantages to purchaser and seller of buying wood by weight were told by representatives of two Minnesota firms at a fall meeting of the Upper Mississippi Valley Section, FPRS at Duluth.

Harold Olsen of the Wood Conversion Co., Cloquet, Minn., advocated the method as a means of eliminating traditional points of friction between buyer and seller, but warned that a good deal of preliminary research was necessary to determine weight-price ratios suitable to all concerned. Maurice Opsahl, Superior Wood Products Co., Duluth, supported the method as being fairer than the volume method of buying and stated his company never has any dispute as to scale.

Utilization Topic at Ga. FPRS

The problems and future of "Chemical Utilization of Southern Hardwoods" were investigated at the recent annual meeting of the Florida-Georgia-Alabama section of the Forest Products Research Society at Albany, Ga. Among speakers were Harold L. Jones, International Paper Co., Dr. Edward Locke, Forest Products Laboratory, Madison, Wis., Dr. Reavis Sproull, Herty Foundation, Savannah, Ga., Dr. J. B. Huffman, Gainesville, Fla., School of Forestry, and George Scofield, Rayonier Inc., Fernandina, Fla.

Dr. Locke outlined some new techniques and processes for chemical utilization of low grade woods, emphasizing the increasingly important part which combinations of paper and wood promise to take. He also reported on two methods for reducing shrinkage and swelling of wood by as much as 60%.

Dr. Huffman demonstrated some new and unusual applications of wood, proving once again its high degree of versatility and the wide range

You buy more than glue from our "shirt-sleeve" salesmen

You men who have a practical knowledge of what you want from the glues you buy, appreciate the extra you get from National Casein. You like to talk glues and how best to apply them . . . and you'll find our sales representatives to be Glue Men who are as at home in your glue room as they are at your desk.

If you are looking for that *"additional something"* from your glue source, phone the National Casein office nearest you.

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New 1954 Chevrolet Trucks

New Power! New Economy! New Features you want!

New Chevrolet trucks for '54 are here to do your hauling or delivery job faster, more efficiently and more economically.

To begin with, they bring you thrifty new power in *all* models. You save time on every trip with extra reserves of high-compression horsepower under the hood—and you enjoy greatly increased operating economy as well.

In addition, these great new Chevrolet trucks offer new and even greater dependability with increased ruggedness throughout the chassis. You'll find heavier axle shafts in 2-ton models . . . bigger, more durable clutches in light- and heavy-duty models . . . more rigid frames in *all* models. Pickup and stake bodies are plenty rugged, too—and they're roomier for '54!

But that's only the beginning! You enjoy new cab comfort, convenience and safety. Instruments are easier to read . . . controls are easier to reach. A new one-piece curved windshield gives you greater visibility. The new Ride Control Seat* lets you drive in relaxed comfort hour after hour, over all kinds of roads. Seat cushion and back move as a unit to "float" you over bumps without back-rubbing.

In another great advance, new Chevrolet trucks offer you the last word in no-shift driving ease and convenience. With proved truck Hydra-Matic transmission* you can drive all day and make door-to-door deliveries without shifting or clutching. Fact is, there *is* no clutch!

These are some of the many big new benefits awaiting you in the new Chevrolet trucks for '54. Why not plan to get the whole money-saving story at your Chevrolet dealer's soon! . . . Chevrolet Division of General Motors, Detroit 2, Michigan.

Most trustworthy trucks on any job!

CHEVROLET

ADVANCE-DESIGN TRUCKS

CHEVROLET ADVANCE-DESIGN TRUCK FEATURES

THREE GREAT ENGINES—The new "Jobmaster 261" engine* for extra heavy hauling. The "Thriftmaster 235" or "Loadmaster 235" for light-, medium- and heavy-duty hauling. **NEW TRUCK HYDRA-MATIC TRANSMISSION***—offered on ½-, ¾- and 1-ton models. Heavy-Duty **SYNCHRO-MESH TRANSMISSION**—for fast, smooth shifting. **DIAPHRAGM SPRING CLUTCH**—improved-action engagement. **HYPOID REAR AXLE**—for longer life on all models. **TORQUE-ACTION BRAKES**—on all wheels on light- and medium-duty models. **TWIN-ACTION REAR WHEEL BRAKES**—on heavy-duty models. **DUAL-SHOE PARKING BRAKE**—greater holding ability on heavy-duty models. **NEW RIDE CONTROL SEAT***—eliminates back-rubbing. **NEW, LARGER UNIT-DESIGNED PICKUP AND PLATFORM STAKE BODIES**—give increased load space. **COMFORTMASTER CAB**—offers greater comfort, convenience and safety. **PANORAMIC WINDSHIELD**—for increased driver vision. **WIDE-BASE WHEELS**—for increased tire mileage. **BALL-GEAR STEERING**—easier, safer handling. **ADVANCE-DESIGN STYLING**—rugged, handsome appearance. *Optional at extra cost. Ride Control Seat is available on all cab models, "Jobmaster 261" engine on 2-ton models, truck Hydra-Matic transmission on ½-, ¾- and 1-ton models.

MORE CHEVROLET TRUCKS IN USE THAN ANY OTHER MAKE!

of applications to which it can be put.

Officers re-elected were Dr. Sproull, chairman; D. B. Richards, Alabama Polytechnic Institute, vice-chairman; C. M. Kaufman, University of Florida, secretary; Bruce Anderson, Atlanta, membership chairman; and trustees Harley Langdale, Jr., Valdosta, Ga., Julian McGowan, and J. A. Greenwald, Jr., Tampa, Fla.

Short Courses Scheduled

A schedule of short courses especially for the wood using industry has been announced by the New York State College of Forestry, Syracuse. The courses to be held:

Wood Gluing—Feb. 1-5.

Hardwood Lumber Grading—March 22-26.

Dry Kiln Operation—April 26-May 1.

Care and Maintenance of Carbide-tipped Cutting Tools—June 14-18.

Small Sawmill Training School—A 2-day session to be held at sawmills in the Adirondack, southeastern and southwestern regions of New York State. Three sessions to be held in August or September.

All courses except the last named will be held at the college. For further details, registration forms and list of fees, write Department of Forest Extension, State University of New York, College of Forestry, Syracuse 10, N.Y.

Hammerle Joins Forest Farmer

W. C. Hammerle, forester for the Southern Pine Association for the past ten years, has accepted a position with the Forest Farmers Association Cooperative, Atlanta, Ga. His new duties will combine management functions along with publication of the Forest Farmer, the organization's monthly magazine, working closely with J. Walter Myers, Jr., executive director.

Hammerle's long record of service in southern forestry includes periods as state forester of Georgia and later South Carolina. Virgil W. Cothren, Southern Pine Association field representative, will carry on a curtailed forestry program for the association.

Micklewright Joins Teco

James T. Micklewright, Iowa State College graduate and recipient of one of the lumber industry's scholarship awards, has joined the research laboratory staff of Timber Engineering Co., Washington, D. C., according to Carl A. Rishell, director of research.

Micklewright received ten weeks of specialized training at the Teco laboratory during 1952 under a scholarship awarded by the National Lumber Mfrs. Association. As a wood technologist, he is now working on fire resistance tests on wood products. He spent the last year at the U. S. Forest Products Laboratory, Madison, Wis.

Philip McKenna Honored by Engineering Society

P. M. McKenna

For a "great and unique act of genius of an engineering nature," Philip M. McKenna, president of Kennametal Inc., Latrobe, Pa., was awarded the Holley Medal Dec. 2 by the American Society of Mechanical Engineers at its annual meeting in New York City.

In making the award, the Society cited McKenna for having "accomplished a great and timely public benefit through research, development and application of cemented carbide compositions which have contributed

it's the "cut" that counts . . .

Wood parts from Gamble Brothers go together on your assembly line quickly, easily, and accurately . . . because they are made to your *exact* specifications, fully- or semi-machined, solid or laminated. No trimming, no patching, no splitting. All parts are thoroughly kiln-dried to minimize shrinkage and warping.

Remember . . . *it's the cut that counts* . . . and *precision and dependability are guaranteed* when you rely on GAMBLE BROTHERS' more than fifty years' experience in wood engineering.

WRITE OR PHONE TODAY!

Engineered Wood Parts in Southern and Appalachian Hardwoods, Walnut, or Mahogany.

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so much to the art and science of metal-cutting."

McKenna, who is chairman of the Gold Standard League and an authority on monetary economics, was given additional honor by being selected to deliver the Towne Lecture at the society's annual meeting.

Safety Title to American Box

H. Kubes G. Maxfield G. Lukacs

For the fourth consecutive year, the American Box Co., Cleveland, has been awarded the title "Safest Woodworking Plant in Ohio." The award was made at the 3rd annual Greater Cleveland Industrial Safety Campaign banquet. Responsible for the program which has resulted in a no-accident record in four years are Henry S. Kubes, vice-president and manufacturing manager, Glenn E. Maxfield, plant superintendent and George Lukacs, safety director.

Personnel Changes

W. H. Hunt

WILLIAM H. HUNT, midwest division manager in Chicago of U. S. Plywood Corp., has been elected a vice-president and director of the corporation and will make his headquarters in New York city. He has been with the company since 1938 and was previously branch manager in Cleveland and Detroit.

ROBERT H. BERGEN has been named by DeWalt Inc. as district sales manager of a territory comprising Maine, New Hampshire, Vermont, Massachusetts and Rhode Island. Robert A. Wilson has been assigned a territory consisting of that portion of New York state lying west of Ithica.

R. H. Bergen

R. F. Ellis

B. L. Owens

RAY H. ELLIS has been appointed director of sales and Burleigh L. Owens as director of marketing of the Atkins Saw Division of Borg-Warner Corp., Indianapolis, Ind. Long-time members of the Atkins sales organization, Ellis and Owens were until recently assistants to the vice-president in charge of sales. Ellis will be in charge of all internal sales functions, while Owens will direct all outside sales activity.

CARL A. MOELLER has joined Carboloy Department of General Electric Co. in Detroit as an instructor in the customer training school. Formerly supervisory training instructor in the Detroit Ordinance District, he replaces Lloyd Mattson who transferred recently to Carboloy's Edmore permanent magnet plant.

ARTHUR B. CHAPMAN has been elected president of Morgan Co., Oshkosh,

If your production calls for fastening — a ST. JOE Stapler may save you money and cut days off your production schedules.

ST. JOE Machines, Inc. have been building standard and custom-designed staplers to meet manufacturers' particular needs, since 1877.

ST. JOE Staplers automatically drive and clinch their own staples from low-cost coiled wire. The gauge wire is determined by thickness of stock that is necessary to secure the greatest strength and holding power.

Wood, veneer, fibre, light weight metal and many other materials and combinations can be fastened satisfactorily . . . may we show you?

Below — The Automatic Hi-Speed Stapler with continuous chain feed. Stapling heads travel with stock affording dependable even flow and increased production.

WRITE FOR FREE BULLETIN: No. C-135

OUR 77th YEAR

St. Joe Machines, Inc.

ST JOSEPH, MICHIGAN

LIKE TO SEE SAMPLES? SEND SPECIMENS FOR DEMONSTRATIONS.

Wis. woodworking firm and its affiliated companies. Hugo W. Eckardt was elected executive vice-president and will continue as treasurer.

T. G. Barnes

J. T. O'Brien

T. G. BARNES has been elected vice-president in charge of sales at Firth Sterling, Inc., Pittsburgh, and J. T. O'Brien has been elected vice-president in charge of operations. Barnes was general manager of sales at time of his election and O'Brien was in charge of all company operations with the title of works manager.

JOHN L. MACDONALD has been named manager of a newly opened Thor Power Tool Co. factory branch office at Newark, N. J.

EUGENE V. ALLEN has been named administrative assistant to the sales manager at Porter-Cable Machine Co., Syracuse, N. Y., and will direct the sales training and market analysis programs. His former upper New York State sales territory will be taken over by Walter C. Coleman. Robert E. Comstock succeeds Coleman as field representative in the Rhode Island-Massachusetts area.

DONALD J. HANCHETT has been appointed manager of the thermosetting branch, sales development section of the Chemical Division, Koppers Co., Pittsburgh, and Dr. Edwin W. Shand has been named manager of the specialty chemicals branch. Ralph H. Bescher has been named Pittsburgh district manager of sales and operations of the Wood Preserving Division.

FRANK BROSSY has joined the advertising and sales promotion section of Carboloy Department of General Electric Co., Detroit. He was formerly with MacManus, John & Adams, Inc.

Deaths

RALPH D. MAIN, an executive officer of the Minnesota and Ontario Paper Co. since 1941, died at his Minneapolis home Nov. 13. He was with the company since 1919 and was a vice-president since 1951.

HAVE YOU TRIED
California's Wonder Wood?

WOOD WORKING manufacturers all over America are turning to California Redwood for greater operating efficiency and finer products.

For Redwood combines—in one beautiful package—*all* the desirable qualities of a good commercial wood—workability, durability, strength, light weight, paint retention, maximum insulating value, minimum shrinkage.

LANAI FURNITURE combines wrought iron, birch dowels and light, strong, naturally beautiful Redwood in dramatic design.

JALOUSIES on school building employ dimensionally stable Redwood, milled to provide weather-tight seal when closed.

HOME GREENHOUSE takes advantage of Redwood's high insulating value, resistance to weathering, decay, shrinkage, warping.

How these qualities have been used on widely varied wood working jobs is apparent in the photos shown here. To learn how these qualities can be used on *your* job, write the California Redwood Association, 576 Sacramento St., San Francisco 11, California.

A clearing house for Redwood data, the Association is maintained by sixteen leading Redwood mills: M & M Wood Working Co., Northern Redwood Lumber Co., The Pacific Coast Co., Pacific Lumber Co., Rockport Redwood Co., Simpson Logging Co., Union Lumber Co., Warm Springs Redwood Co., Willits Redwood Products Co., Wolf Creek Timber Co., Inc., Arcata Redwood Co., Coastal Plywood & Timber Co., Eureka Redwood Lumber Co., Hammond Lumber Co., Holmes Eureka Lumber Co., Hulbert & Muffly Lumber Mill.

LUMBER INVENTORY CONTROL

Continued from Page 30

in the next 60 days, therefore at least 75,000 ft. should be ordered immediately to maintain the *minimum* requirements.

Along with inventory control, a finer breakdown of availability of kiln-dried lumber may be necessary to insure continuous operation of the mill. In order to meet promised shipping dates, an up-to-date weekly analysis may be prepared as shown in Fig. 2.

This report shows the thickness, grade and species required for specific customer orders. It indicates the name of the customer by initials, and the week in which the lumber is required for cutting. Immediately under this is shown exactly what will be available.

At the extreme right is shown the exact amount of lumber that is on hand in the following conditions:

1. Kiln dried ready for cutting.
2. Amounts in dry kilns.
3. Amount on yard well air dried.
4. Amount of green lumber (usually material most recently acquired).

This report is essential, particularly to the production control supervisor who has the responsibility for scheduling work.

Where only one species is handled, this report can be simplified. However, it is of particular importance to a company handling several species of wood.

PATENT DIGEST

Gluing

H. Renn (to M and M Woodworking). U.S. 2,649,877, Aug. 25. In a high frequency glue curing press, a pressure member having work engaging electrodes of different polarity adapted to be connected with a high frequency generator, a member for moving said pressure member toward and away from a work piece and operational means.

Log Debarking

O. R. Kolpe and O. B. Anderson. U.S. 2,646,902, July 21. Debarking machine including a frame, an annular bearing, a drum rotatably mounted, shafts mounted on the inner periphery of the drum, and debarking tools carried by the shafts.

Parquetry Blocks

C. E. Tibbals (to A. T. Tibbals). U.S. 2,650,627, Sept. 1. In a parquetry machine having means for feeding blocks from the bed of the machine, means for flexing the blocks immediately prior to ejection from the bed so as to spread the pieces of each block apart at the bottom to provide V-shaped grooves between the pieces and to flex the spline joining the pieces whereby the block will return to flat from due to resiliency of the spline, thereby changing the grooves between pieces into hairline cracks.

Sawmill Feed

M. M. Barksdale. U.S. 2,648,350, Aug. 11. A feed unit for sawmill carriages including a base, a cable drum, and hydraulic operating means.

Wood Preservation

H. G. Walker (to Pennsylvania Salt). U.S. 2,650,893, Sept. 1. Treating wood to render it termite-resistant comprising impregnating with dimethyl tetrachlorophthalate.

Log Turner

J. Daubel. U. S. 2,639,738, May 26. Power operated log turner with a horizontally pivoted frame having a vertically movable forward end an means for tilting a slide carrier, guiding means, and power means.

Structural Unit

P. de Anguera (to E. de Anguera). U.S. 2,650,395, Sept. 1. Composite structural unit having elongate wooden boards in parallel rows, a number of longitudinal bores formed transversely through the boards and a thin connector key extending through each bore.

Reciprocating Saw

F. S. Russell (to R. C. S. Engineering Co.). U.S. 2,646,094, July 21. A saw blade comprising a long shaft having a bottom edge, a top edge, and side walls providing greater thickness at the bottom than at the top and means for attaching to a reciprocating driving member.

Tree Felling

R. E. Long. U.S. 2,650,628, Sept. 1. Attachment for use on a tractor for tree felling and land clearing.

Veneer Lathe

J. T. Latimer (to Jackson Industries, Inc.). U.S. 2,650,629, Sept. 1. Veneer lathe embodying an improved pressure bar actuating mechanism.

Wood Impregnating

M. S. Hudson. U.S. 2,650,885, Sept. 1. In the impregnation of wood with a normally liquid oil-borne preservative, the method of removing the solvent oil component from the impregnat wood, comprising heating and impregnated wood in a closed space with hot vapors of the solvent oil at a temperature above the boiling point of the oil.

Saw

F. A. Pall (to I. M. Pall). U.S. 2,648,360, Aug. 11. Saw with a concaved leading chisel edge and planar offset side surface on each tooth.

Shingle Surfacing

J. S. Gifford. U.S. 2,647,547, August 4. Shingle machine comprising a bed, conveyors having flights for engaging shingles, trimming devices, and a surfacing mechanism.

Shingles

L. B. Dennison. U.S. 2,646,093, July 21. Forming a block of wood having flat upper and lower faces, forming in one face of the block a number of grooves extending length wise of the block, and cutting the block to remove a grooved shingle.

Planing Machine

O. Waldrich. U.S. 2,656,727, July 28. Tool for planing or shaping machines having a plurality of groups of cutting edges one group disposed for engagement with the material in skewed relation to the line of movement of the material and the second set skewed in opposite direction.

Door Lining

M. R. Jonsson. U. S. 2,639,472, May 26. In a wall structure, the combination with a frame member defining a portion of the perimeter of an opening in the wall of means for masking the joint comprising a plywood cover of U-shaped channel section.

Log Barkers

H. W. Guettler. U.S. 2,647,548, August 4. In a log barker, an open top vat, log propelling and agitating chain means having log-engaging lugs for contacting logs with a debarking device.

Hand Planer

K. Reich and G. Walliser (to Firma Karl M. Reich). U.S. 2,649,873, Aug. 25. Electrically driven planing machine comprising an external rotor motor having cutters in the rotor, and mounted in a housing for manual operation.

WALLY WALNUT Says:

"Here's Why MIDWEST Offers You your BEST BUY in WALNUT"

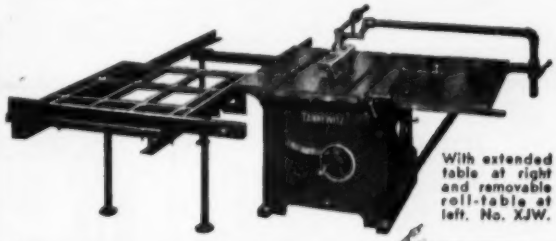
- You buy a **specialized product.** We select, cut, and sell only Walnut lumber — not a dozen different woods.
- You buy a **quality product.** We supply you choice, usable steamed Walnut lumber, the best to be had.
- You buy a **specific product.** Steamed Walnut lumber, dimension, and squares—the products of our sawmill and dry kilns—are our specialty. Air dried stock is available for immediate shipment.
- You buy an **economical product.** Our prices are competitive. What's more, our varied locations usually mean delivery at lower freight rates.

Write TODAY for Detailed Prices or Other Information!

MIDWEST WALNUT CO.

COUNCIL BLUFFS, IOWA

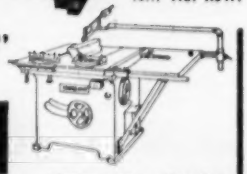
WARTRACE, TENN. WILLOW SPRINGS, MO.



With extended table at right and removable roll-table at left. No. XJW.

Tannewitz "XJ"

FINEST THING IN MITRE SAWS!



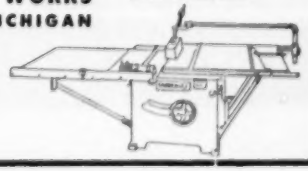
Sliding left section top and extended table at right. No. XJSW.

Choice of 5 different tables enables you to obtain a mitre saw that matches EXACTLY your production requirements. Does away with awkward working conditions, steps up production, and saves time and money. Nothing like it. Moderately priced. Write for Bulletin XJ.

Standard solid table. (No. XJ) or sliding left section. No. XJS.

THE TANNEWITZ WORKS

GRAND RAPIDS, MICHIGAN



Extended table at right — extended sliding table at left. No. XJSW — J-430.

WOOD VS. COMPETITION

Continued from Page 22

industry was argued by D. F. Rautenbush, who noted that the chief advantage of his industry was its ability to make reproductions of expensive artwork available to the public at mass production costs.

One of the early uses of decalcomania in the building material business was the transfer of marble patterns to the face of hardboard. Millions of feet of such products have been turned out where in 99 cases out of 100 genuine marble would not have been used. He also pointed to examples where the use of decalcomania had helped hardwood plywood compete against hardboard in the low-priced TV cabinet field.

Mr. Rautenbush said that "today industry has many materials from which to choose. If a product is new and does a job better at the same cost or as well at a lower cost, then it is a smart choice to adopt it. You generally substitute one material when the other is short or not available. The word 'substitute' is too often used and very often misused. Possibly this hangs over from wartime civilian business when real substitutes were actually necessary.

"Our type of product would be best described as a 'synthetic'. We make it to sell on its own merits in stiff but wholesome competition, which is the incentive factor that should be recognized by any forward-looking industry."

Edward Coleman listed two underlying factors in the growth of the use of transfers in the furniture business. One is reduced cost, since it is possible to make "fine wood reproductions" on a mass production basis. The second is the opportunity that "multiple, exact reproduction of a wood pattern" gives the designer.

William Hunt, speaking on the status of plywood in relation to competitive raw materials, particularly those outside the field of wood or wood-derived products, pointed out some of the areas in which competition has made inroads into wood markets and, vice versa, places where wood products might make inroads into competition. He listed the following competitors to lumber and plywood, some stemming from within the industry and others from without:

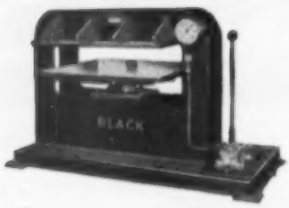
Metals for cabinet work, back bars, elevator cab linings, others. Decorated laminated plastic material—for desk and table tops, wall coverings, radio and television cabinets. Hardboard and coated boards for mirror backs, drawer bottoms, enclosures, wall coverings, radio and television cabinets. Wallpaper over gypsum for exhibits and displays, and as a wall covering. Brick and stone for mantels, as wall covering, and for other uses inside the home. Graining material which can be applied not only to wood but to other materials. Finally, in the flooring field—cork, linoleum, vinyl, rubber tiles.

"Is this competition justified in the wood industry?" Mr. Hunt asked. "In all honesty we must admit that many of these competitive materials are. Some are justified on the basis of cost. Yet, if we are to sell wood, we must remember that cost is not always the only consideration; there is also *quality*, and thus it becomes a question of salesmanship wherein a good wood product demanding a better price than a substitute must show that it has better qualities for the money.

"Others are justified on the basis of utility. An example is the automobile dashboard where the finishing people have applied wood grain effects to metal . . . interesting to note that even competitive materials imitate wood grain."

What can be done about inroads of competition? Mr. Hunt advocated four

Presses

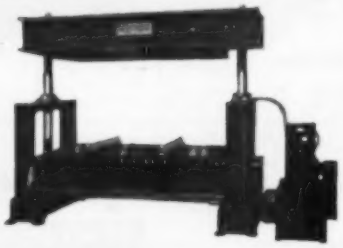


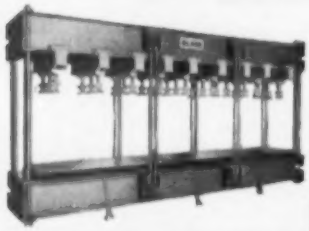
HYDRAULIC PRESSES

Black's hydraulic laminating press is designed for laboratory and experimental work or light production operation. Standard sizes from 1 to 12 or more square feet and pressures up to 100 tons. Now available with heated platens. Variations may be had in size of platens, vertical opening, length of stroke, total pressure applied, heated platens and fast closure arrangements. Write for Bulletin 11-P.

ELECTRIC PRESSES

Black's electric press is fast and efficient on laminating jobs which require moderate pressure, and has proved to be especially popular in the laminating of flush doors and plastic laminates. Here is a high production press at a low initial cost which will give continuous service with an irreducible minimum of maintenance and attention. Write for Bulletin 11-E.





HAND POWERED PRESSES

Black's all steel aircraft model press is stronger and more rigid than conventional presses . . . has wide flange main beams, double corner posts and multiple strain rods. Designed for compact installation requiring no blocking or pit. Offered in a complete range of sizes for every conceivable requirement. Also ten sizes of sectional press units are available. Write for Bulletin 11-G.

"If its gluing equipment—we have it"

write today . . .

THE BLACK BROTHERS CO., INC.

820 9th St., MENDOTA, ILLINOIS

solutions: (1) More research; (2) more and better advertising; (3) more promotion, and (4) direct contact with customers.

He urged research to develop more effective fireproofing of wood; to make wood products more attractive in design; to develop finishes for natural wood which will have qualities of hardness and scratchproofness as good as those found in the plastics; to reduce the cost of adhesives; to develop new types of machines and manufacturing methods; to develop lower-cost core stock for furniture.

"One of the most important ways in which we can meet competition is by establishing greater contact with the people who use our merchandise," said the speaker. "Primary channels for doing this job include lumber dealers, designers, architects, interior decorators, builders and contractors. We need to educate these people on the merits of wood in its various forms.

"People like and want wood, and the fact that they do makes our job much easier. If this statement weren't true, why would wood be imitated as widely as it is, in wall covering, in decorative hardboard, in plastic sheeting? Our job is to let the public know we have the product and give it to them at a price they can afford to pay."

Charles Close pointed out that the hardwood plywood industry, having recognized which of the so-called competition comes from without the wood industry and that which is intra-industry, has generally "happily married some of the so-called competitive materials which in the long run will materially increase wood's total share in the national economy." For example, he mentioned such combinations as metal-faced plywoods, paper overlays, plastic overlays, and even plywood covered with various imitations of the genuine.

Emphasizing the importance of knowing your product as well as your competition, Mr. Close offered a comparison of physical and mechanical properties of natural wood versus hardboard, using ⅛ in. panels of the latter and of birch or gum plywood. He contended that with such comparative data plywood will hold its own and, in combination with other so-called competitive materials, will retain its uses and its markets.

P. M. Clark made the point that many materials become even more competitive to wood when simulated wood designs are printed on their surfaces. As examples he cited the possibility of printing wood grain on plastic boats to give them the appearance people are accustomed to; printing of grain on steel kitchen cabinets to help another wood competitor gain the appearance of wood, and the use of wood grains on metals and inorganic board products for use as paneling, siding and structural board.

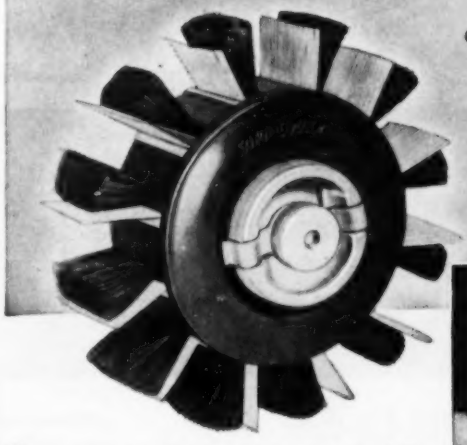
Charles Beiger directed his remarks to that part of the industry that fabricates wood. "Your knowledge of costs is nil," he said. "You need more than just to find you have made a profit at the end of the year. Cost details on operations at every stage are needed. Otherwise you cannot be competitive with a particular item. It doesn't help to know merely that one chair costs more than another. You must know costs for each specific chair part to bid against competing materials. Plastics know their costs well, and so do metals.

"The woodworking industry must have a great potential, when you consider that it has operated so long without knowing its costs. Cost accounting systems are not expensive. The job can be done reasonably. But you must know costs in detail, and soon, to meet competition."

Speaking on the need for advertising, promotion and publicity, Ted Connelly expressed the conviction that

SAND-O-FLEX

ALL PURPOSE CONTOUR SANDER



- Speeds Up Sanding and Finishing
- Gets at Hard-to-reach places
- Fits on your present tools

On any wood surface, curved or flat, Sand-O-Flex wheels produce the surface you want... *quickly*. Flexible brushes back up the abrasive strips and conform them to the shape of the object sanded. On uneven surfaces you easily, speedily sand recessed areas that would be hard to reach any other way. Sand-O-Flex puts beautiful satin finishes on metal and is equally effective on plastics and other materials that require sanding, de-burring or finishing. As abrasive strips become worn, twisting a knob feeds out fresh abrasive from the reel inside the wheel. Replacement abrasive strips in many grits are available and easily inserted.

Use Sand-O-Flex wheels on your present equipment . . . adaptors available for lathes, mandrels, drill presses, flexible shafts and electric hand drills.

Write for descriptive literature and price list.

Above—Used with electric hand drill to refinish poster on antique bed.

Below—Mounted for fast finishing of flat strips with rounded edges.

Sanding Problem?

Write us about it. Our experts will gladly study your problem, and they have a way of producing sound suggestions. No obligation... write us today.

MERIT PRODUCTS, INC., 4023 Irving Place, Culver City, Calif.

various segments of our vast wood industry can do specific jobs at both the consumer level and the dealer level on a basis that is reasonable, and although it will not be an 'all-out' program it at least will be doing something where comparatively little has been done up to now. I believe the companies and associations that make up the hardwood portion of our industry should pool their forces and do a co-ordinated job. The same thing should be done by the softwood groups.

"Sure, we have the best product—WOOD. In certain cases a species is desirable because of its specific gravity, in other cases because of its tensile strength, in others because of the matchless natural, intrinsic beauty imparted to it by the miraculous pallet of Mother Nature. We have 160 million prospects in the U. S., all with a natural love for natural wood—not steel that imitates wood, not plastic that imitates wood, not anything that imitates wood. They want *wood*. We must strive unceasingly to make it possible for a high percentage to have wood by increasing efficiency and cutting our costs.

"Some markets we must write off—but others have been lost unnecessarily because of indifference and apathy. It is high time our sleeping giant roused himself. Right now I feel he is only up on one elbow. But even that is encouraging. Some constructive things have definitely been done."

As one outstanding example he cited the "World of Hardwoods" exhibited in Chicago, in the organization of which he was a leading force.

Describing the trade promotion program of the Hardwood Plywood Institute, R. D. Behm reported that birch, oak, gum, mahogany, maple and walnut make up 90% of the group's sales. Main factors tending to hold down sales, he said, were: (1) Lack of uniform grade designations; (2) lack of information about physical properties; and (3) lack of availability at the retail level.

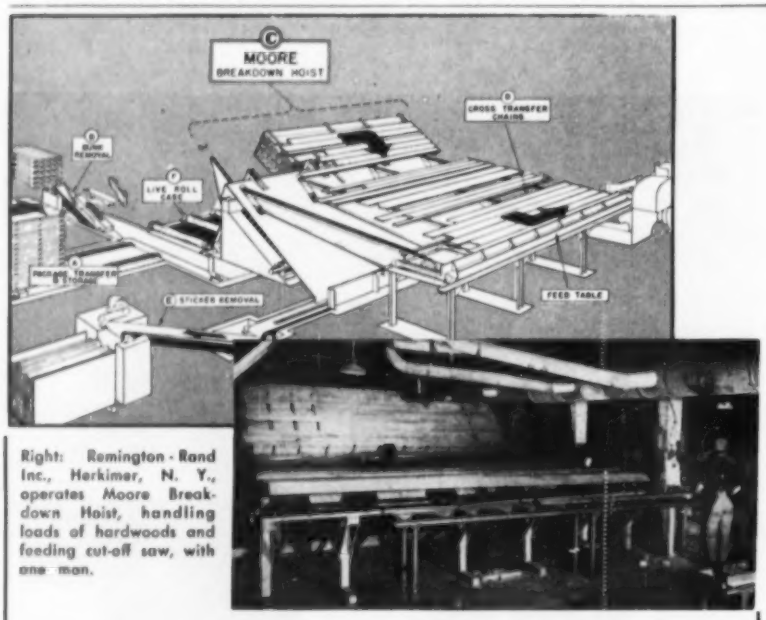
To meet these major problems, grade designations have been adopted that are simple and understandable to the public, and a catalog-sales brochure has been developed that lists the sales points and physical characteristics of hardwood plywood. In addition, the Institute is currently making a million impressions per day on prospective customers through advertising and publicity.

R. P. A. Johnson listed four fields in which better utilization could be practiced profitably: (1) Harvesting; (2) processing raw materials; (3) fabrication of finished materials, and (4) improved service.

In the first field, he pointed out that inferior species now being left in the woods can be harvested at a profit, as are pecky cypress and white pocket Douglas fir, through research and improved marketing.

Discussing processing of raw materials, he said one of the major problems is to get integration, citing a recent House of Representatives subcommittee recommendation that pulp mills and sawmills should be planned on an integrated basis in order to utilize more of the total tree profitably. He pointed to the hardboard industry as an example of profitable utilization. In 1948 there was one such mill, today there are 20. The demand was not for a better board, he said, but for a lower cost board. He also cited companies in the millwork industry that are now using their own residues to produce particle boards which in turn become part of the end-products of the millwork plants themselves.

On better fabrication methods, Mr. Johnson pointed out that modern timber connectors have extended practical heights of radio towers from 80 ft. (the length of single sawed timbers) to 300 ft. Other examples of wood meet-



Right: Remington-Rand Inc., Herkimer, N. Y., operates Moore Breakdown Hoist, handling loads of hardwoods and feeding cut-off saw, with one man.

POWER HANDLE Lumber
with A Moore Breakdown Hoist
for Peak Efficiency—Minimum Cost

The Moore Breakdown Hoist has many cost-saving applications in the lumber and woodworking plant:

1. Unstacks solid or stickered packages—removes stickers
2. Feeds sorting and grading chains
3. Feeds planers, trimmers, resaws and similar machines
4. Feeds lumber stackers

Find out how the advantages of a Moore Breakdown Hoist can be utilized in your plant. Write today for information.

MOORE DRY KILN COMPANY
Oldest and Largest Manufacturers of Dry Kilns and Veneer Dryers
JACKSONVILLE FLORIDA · BRAMPTON ONT. CANADA · VANCOUVER B. C. CANADA · NORTH PORTLAND OREGON

ing competition through better fabrication include development of laminating techniques, with the ability to make various shapes, for the farm market, churches, bridges, and other uses.

In the field of service, Mr. Johnson pointed to four chief factors which competitors use to fight wood. He said that research can help wood perform better under adverse conditions, such as fire. As to decay, he said you don't have to treat wood in most places where it can be kept dry and ventilated, but where wood is to be in contact with the ground it should be properly treated. Proper construction methods and/or treating can practically eliminate termites as a problem. Pointing out that instability has been a tough problem (for example, in the making of patterns), he reported that some industries are today treating wood and holding it to hundredths-of-an-inch tolerances.

"Many of the answers to meeting competition can be found through research, in the laboratories, in factories, and in markets where wood is used," he concluded. "Our job is to develop products with superior qualities, or to study and overcome objectionable features of present products."

"The public today," said Muir Rogers, "is much more conscious of defects in finishes than ever before. In the old days, water spotting, easy scratching, cold checking, crazing, discoloration of furniture were usually attributed to carelessness on the part of the owner or the natural result of age. Now the customer insists that the finish be good and that it hold up, or else he insists on restitution.

"This means that hit-and-miss methods of making finishing material are gone. Today, with the necessity of quantity production in manufacturers' plants where conveyors, ovens and other time and labor saving devices are being used, the finishes must be tailored to each setup. The slightest disruption may cause a complete shutdown.

"Inasmuch as the finish is as essential to the wood industry as the wood on which it is applied is to the finishing industry, my suggestion would be that the wood industry set up a department or group which will work closely with our industry, so that in our collaboration we can be beneficial to each other and do a better all-round job for our mutual customers."

Quality control in many plants, Alexander Stuart noted, is a farce, simply because quality standards are in somebody's mind and not down on paper so that everybody concerned knows exactly what is expected. Consequently, the first job in instituting a quality control program is to write down in detail exactly what constitutes a marketable product—from raw material to finish.

Three key points in establishing a program are: (1) Have a manual of quality standards and keep it up to date; (2) keep the department as small as possible, using it for spot checks; (3) hold the foreman and his men responsible for work done in their departments.

On the matter of cost control, Mr. Stuart said that carefully detailed and up-to-date records on every operation can save many thousands of dollars. He outlined a method for setting up standard operating costs for each operation, and of keeping records so that actual production costs can constantly be checked against the standards.

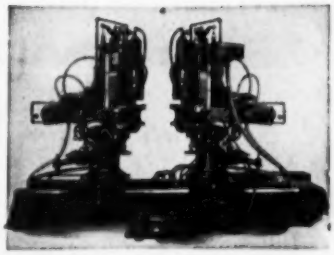
"The wood industry has been on the defensive, and still is," said J. A. Potchen. "The first job to do is get on the *offensive*. Our company uses lots of wood, but only when it is the best material for the job. And we combine materials when we can do the best job that way.

"If we decide we can handle the job, the engineering department decides how the product should be

For Fast, Precision, Low Cost BORING

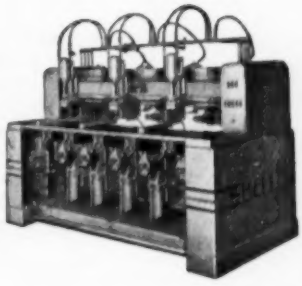
No. 24 **DOUBLE-END SAWING, BORING and CHUCKING MACHINE**

For manufacturers making chairs, radio cabinets, parlor frames, tables, bedroom or other furniture—this Bell 24 is a top-flight money-maker. Saws and bores or saws and chucks both ends at once, as high as 1500 per hour when fed two pieces at a time—or 750 to 1000, one piece at a time. In addition to speed, the work is done accurately—assembly goes faster, spoilage is minimized. Set-ups average about 20 minutes.



No. 100 **POST BORER**

The No. 100 Front or Back Post Borer also can take costs for a nose-dive with speeds of 600 to 750 back posts per hour—each post is completely bored, all holes at once, in one operation. Here, too, accurate alignment of all holes pays a bonus profit. Set-up time averages 18 to 22 minutes.



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WOODWORKING MACHINERY

THE BELL MACHINE COMPANY
78 Jackson Dr., Oshkosh, Wisconsin

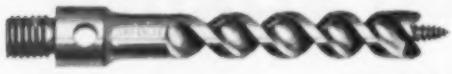
made. They make use of any materials that fit the picture—wood, metal, plastic, or combinations. Once we have taken a job, we build the machinery around the demands of the product. If you try to build the product around the machinery you have available, you will soon become obsolete.

"Think in long-range terms. We like a project where we can look ahead five years to completion. That makes it worthwhile to plan right. Don't hesitate to use materials in combination. Keep wood in the foreground, if you will, but be flexible. Combine it with other materials if you can do a better job that way."

At a short business session on the second day the Midwest Section elected the following officers and trustees for 1954:

Chairman, Carl Binner, Morgan Co., Oshkosh, Wis.; vice-chairman, Wayne Lewis, U. S. Forest Products Laboratory, Madison, Wis.; secretary, Ed Rutledge, Algoma Plywood Co., Algoma, Wis., and treasurer, Hank Puff, Durez Co., Chicago. Trustees—Ted Connelly, Dean Co., Chicago; Ralph Casselman, Paine Lumber Co., Oshkosh, and Jack Koellisch, WOOD & WOOD PRODUCTS, Chicago, all for two-year terms; and Jerry Saeman, Forest Products Laboratory, one year. Carryover trustees are George Stanley, Pressed Steel Car Co., Chicago, and Forest Beil, Curtis Companies, Clinton, Iowa.

At a preliminary session held the evening preceding the two-day meeting, a National Committee on Marketing was formed. At the request of FPRS President Robert D. Pauley, of Tacoma, Wash., Philip Creden, merchandising manager of the Edward Hines Lumber Co., Chicago, agreed to serve as temporary chairman until the 1954 national meeting of the Forest Products Research Society at Grand Rapids, Mich., next May.



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screw shank dowel bits and drills...

When you're working with dowel pins, a "pretty good" fit is not good enough. It has to be *accurate*. That's why so many leading woodworking people standardize on GREENLEE screw shank dowel bits and drills. Each is precision made of the best materials . . . carefully heat treated . . . *accurately sized* to the indicated diameter. Write for free folder M-159, Greenlee Tool Co., 21[illegible] Herbert Ave., Rockford, Ill.

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GREENLEE TOOL CO., DIVISION OF GREENLEE BROS. & CO., ROCKFORD, ILLINOIS

Hollow Chisels • Machine Bits • Drills • Routing Bits • Multi-spur Bits

Plug Cutters • Countersinks • Makers of Teco Grooving Tools for Timber Construction

LUMBER CORE PRESSES

Continued from Page 34

pistons (4 vertical and 28 horizontal on 3 in. centers), with their actuating levers, cables and rachets, are shown in detail.

All are located between the main side frames and covered by the protective hood over the heated platens. The glue conveyors are shown in cross section, directly above the lay-up shelf. The photograph in Fig. 3 corresponds to position 7 indicated in the functional drawing of Fig. 4.

The progress of a core through the several steps of the operating cycle may be more clearly understood by the simpler progressive functional diagrams of Fig. 4. The entire operating cycle, from position 1 to position 7, is fully automatic, once the starting button is depressed, from pushing the fresh core from the lay-up shelf into the hot press, and until it is pushed out of the hot press onto the unloading shelf.

Position 7 represents the start of the operating cycle and all core locations are the same as in position 1, which marks the end of the curing cycle, when the finished core blank is ready for removal from the machine.

A machine for clamping cores with electronic heat, called the "Roto-Gluer", is illustrated in Fig. 5, in which the lay-up table is empty. In the center of the machine can be noted the pin, or vertical shaft, around which the table rotates in a horizontal plane.

Both ends of this table are alike and are alternately used for lay-up and curing requirements. The mid section of the table is elevated approximately one inch, and the operator pushes the core strips against this as a back gauge. Automatic devices, under the hood, repeat this edge pressure just as

the press is closing and continue it during the curing cycle.

Supplementary equipment, not shown in the photograph, consists of the transformer, located directly back of the machine, and the glue applicator device, which is located at the right of the operator.

The glue applicator provides a pair of conveyor chains, with cross links set edgewise, leading to the central glue applicator roller. The under surface of this roller dips into the glue reservoir beneath and the ratio of glue spread is regulated by a doctor roll that squeezes off any surplus glue and provides no more than the desired amount of adhesive. The glue roller has a grooved rubber surface, and the doctor roll is smooth, chromium plated, running at a slightly slower rate to give a wiping effect.

Both are driven by an electric motor, as are the conveyor chains. The adhesive reservoir is equipped with a jacket for cold water circulation, in order to maintain the resin adhesive at a temperature that will assure a maximum of useful life for the mixture.

There is also a similar pair of conveyor chains leading away from the glue applicator roller, under electric eye control, which shuts off the motor, if the operator is not ready for the freshly glued stock at the lay-up table.

The cycle of operations is more clearly shown in the outline sketches of Fig. 6, which are top side views, looking down. In the upper sketch the core in the electronic press is nearly cured, while the fresh core with glued edges has been laid up.

In the middle sketch the operator has just touched the control button at his left and the table has started to rotate. This turning is by an air motor, and swings the cured core blank out of the press, which has just been opened by the air motor, and enters the assembled, but uncured, core blank in the open press. When a half turn (180°) has been completed, the rotation automatically stops, the side and face pressure starts and the press closes.

In the lower sketch the cured core blank is transferred to the truck or pallet. The operator then begins to lay up the next core and the cycle is repeated.

The transformer, which may be 5 or 10 k.w., according to the speed desired, as well as to the thickness and density of the stock, stands alone behind the roto-gluer, where ample ventilation is provided to guard against overheating. When once set correctly for a given type of product, it needs no further attention.

The upper electrode, under the protective hood, is raised and lowered by pneumatic jacks. Whichever end of the table is under the hood becomes the lower electrode and is connected to the transformer only when the press is closed. The upper electrode also is energized only when the press is closed.

This vertical pressure from the pneumatic jacks is no more than enough to flatten the core strips. The horizontal side or edge pressure, exerted by another series of pneumatic jacks, starts a bit ahead of the vertical pressure, in order to insure tight joints before the core blank is flattened.

The maximum size of core that can be laid up on this roto-gluer is 64 in. long by 45 in. wide, and daily capacity is estimated to be from 3,000 to 6,000 sq. ft. of core blanks, depending on size of core. The operating cycle varies between 1 and 3 minutes, according to conditions. Floor space occupied by the roto-gluer and its supplementary devices is 21 by 9 ft. This operation is wholly automatic, once the pushbutton has been depressed.

It is interesting to note that these two machines for gluing and clamping

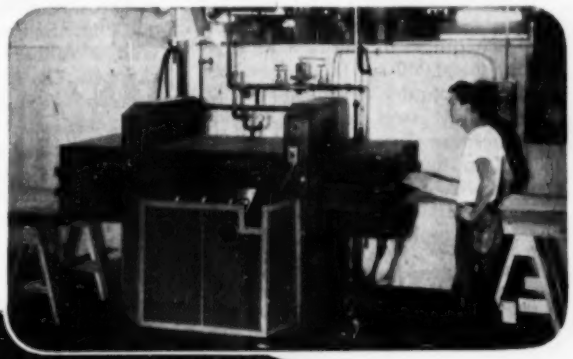
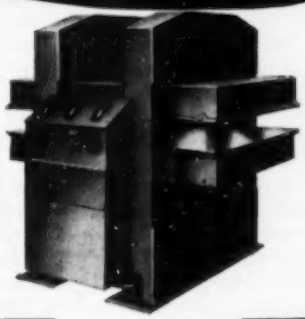


PHOTO AT RIGHT courtesy of the Mengel Company, Louisville, Ky., illustrates a VB 38x100 — 2 opening press being used for flattening veneer.

ELIMINATE WASTE and REJECTS—

Flatten Veneer with a . . . .

VB hot press



The new modern design of VB HOT PRESSES is shown above. It features an all enclosed frame, all welded platens and an Automatic control panel. Available in single or multi-opening models in sizes from 38-50 and up.

Flattening Veneer to insure full utilization and maintain its quality is only one of the many operations that can be performed on an automatic VB Hot Press. This versatile press can be used for such operations as:

- plywood
- fine veneered panels
- flush doors & millwork
- veneered stiles & rails
- 2 ply scotch veneer
- plastic table & desk tops
- formed plywood
- laminated musical instrument fronts and backs

and many others.

Why not investigate the advantages of a VB Hot Press for your plant?

WRITE TODAY

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core stock, as well as solid lumber parts, are distinctly different in the method employed to enter, forward and discharge the core blank. They are in no sense competitive copies, one of the other. Even the heat sources are different. Both machines are relatively recent developments, but there have been enough installations of each to demonstrate their efficency in every-day factory service.

This range of methods requires unusual discrimination on the part of management to determine which is best adapted to the work in hand. Neither are large output machines, being best adapted to daily runs averaging some 5,000 sq. ft. of lumber cores.

However, their man-hour ratios are reasonably comparable with the larger pieces of equipment that turn out from 10,000 to 20,000 sq. ft. of cores per day, but require larger operating crews. Many large factories will find that these smaller machines, as described in this article, are excellent supplementary equipment for short runs, special orders, and other miscellaneous applications.

Editor's Note.—James L. Taylor Mfg. Co., Poughkeepsie, N. Y., and Plycor Co., a division of Earle Hart Woodworking Machinery Co., Chicago, supplied data, sketches and photographs for this article.

SANDING MACHINES

Continued from Page 27

28 ft.; for 10 ft. machine, 32 ft. Speed of sand belt with 1,200 r.p.m. motor, 5,000 f.p.m.; with 1,800 r.p.m. motor, 7,500 f.p.m. Sand belt motors are 15 h.p. maximum; hydraulic pump motor is 5 h.p.

BELT, MOLDING, OTHER SANDERS

Bouligny Co.—A new belt sander, named "Molsander," which promises increased production rates in the sanding of mouldings. Has automatic feed mechanism which carries work through the machine at rates of 20 to 55 f.p.m.

In addition to the standard sanding head, to which a formed block is mounted, in some instances a second head is added which eliminates returning the work for extra passes and extends usefulness of the sander to a greater variety of moulding shapes.

To assure constant feed, the sander contains power-driven upper and lower feed rolls covered with replaceable rubber tires, and a rubber-covered endless belt.

The machine will handle work up to 8 in. wide or 8 in. high and in any usual length. It uses a 23 ft. sanding belt, with a maximum width of 9 in., powered by a 5 h.p. motor. A two-speed motor is available as extra equipment. Feed mechanism is driven by a ½ h.p. motor.

Pearson Sanding Machine Co.—Block and edge sander of simple design and rugged construction, easily adapted to five types of sanding operations: (1) Stationary mould block; (2) hand slide block; (3) curved edge; (4) straight edge, and (5) spool sanding.

Particularly adaptable to short-run production work and special jobs, the sander uses a 4 in. belt 223 in. in length. The belt is driven by a 1½ h.p. electric motor running at 1,800 r.p.m.

The unit is supplied with a 4 in. and 6 in. aluminum drive pulley cased with a rubber rim to prevent belt slippage. The table is 9 ft. long, 2 ft. wide and 35 in. high.

Pearson also exhibited a mould sander conversion unit designed to take advantage of cooler cutting action and increased rate of production gained through use of coated belts.

B. M. Root Co.—Style M-207 extra-large disc sanders, both single and double disc types, designed to provide an efficient production line method of quickly sanding assembled cabinets or other articles requiring a large sanding area. Made in 36 in., 48 in. and 60 in. disc sizes, these units are used as general purpose sanders in furniture, case goods, cabinet, agricultural implement, handle and body plants.

The sanding disc is metal with milled surface and hardboard facing. Method of fastening the abrasive material permits effective use of entire disc face, and there are no projections to prevent the operator from passing stock across the sanding surface. The table has a vertical adjustment, can be tilted upwards, and has an in-out adjustment to keep table edge close to sanding surface.

On the single disc machine, a 5 h.p. 1,800 r.p.m. motor on adjustable mounting bracket drives the extra-heavy disc shaft through a multiple V-belt drive. The shaft revolves in precision ball-bearing pillow blocks with double dust seals. Disc speeds are: for 36 in. unit, 600 r.p.m.; 48 in., 500 r.p.m.; 60 in., 390 r.p.m.

The 60 in. double disc model illustrated has a 10 h.p. 1,200 r.p.m. motor which drives the discs at 300 r.p.m. by reduction.

Murdock Machines.—A new contact sander with 12 in. wide wheel, reported to increase production speed by 25%. In addition to quick grit changes with less "down time," there are no unused sandpaper ends to throw away. By using a wider belt, belt costs are reduced.

Production increase results because the belt sander permits more surface feet per minute to pass over the point of contact and allows cooler cutting.

Oliver Machinery Co.—A new reversible belt sander, No. 183, can serve either as a moulding sander or as a flat sander merely by flicking a safety first reversing switch. It is designed for rapidly sanding and polishing all kinds of line and edge mouldings, straight, flat and irregular surfaces, and for sanding and finishing built-up pieces, such as cedar chests, desks, chairs and all kinds of medium sized pieces of furniture.

The machine will take work of any practical length and sand to center of 66 in. It will take work on table 18 in. high and on floor 44 in. high. Used as a moulding sander, work up to 10 in. high can be sanded.

Three separate self contained units make up the machine. The set-up is simple and the alignment is readily accomplished as the idler pulley is universally adjustable. The table may be removed for sanding large work. The machine is motor driven and furnished with a 2 h.p., 3-phase, 60 cycle, 220/440 volt, 900 r.p.m. ball bearing motor.

SANDER CONVERTERS AND ATTACHMENTS

King Mfg. Co.—A new heavy-duty woodworking machinery work-feed attachment, powered by a ½ h.p. motor and equipped with four feed rollers.

Designed especially for the furniture manufacturing industry, the new model is rigidly built to insure positive and uniform feed without development of waves or humps in the work, and is reported to double the production over hand-fed operations. It will take short dimension stock as well as long work.

The unit may also be adapted to miter saws, jointers and other woodworking machines. Its rate of feed is adjustable from 20 to 90 f.p.m. in four speeds. The frame is a one-piece aluminum casting. The machine is 24 in. long, 15 in. wide and 11 in. high.

J. M. Lancaster, Inc.—Glass lip insert on platen of drawer sanding machine, designed to reduce frictional heat and resulting tendency to burn the wood. Controlling this problem means prolonged belt life and elimination of rework.

Machine has a 42 x 15 in. sanding bed and uses a coated abrasive belt 15 ft. x 2 in. x 14 in. A 5 h.p. ball-bearing motor with a V-belt drive powers the unit.

PORTABLE SANDERS

Sundstrand Machine Tool Co.—Air-powered sanding and rubbing machines, featuring the opposed air sander No. 1,000 and No. 600 heavy-duty machine.

The heavy-duty machine is designed for sanding, pumice rubbing or polishing of large flat surfaces. Weighing approximately 30 lb., to give necessary pressure for fast, fine finishing, it operates at 1,100 oscillations per minute with a 1½ in. stroke.

The lighter machine, with pad speed of 2,500 oscillations per minute, has opposed straight-line action for wet or dry sanding.

Porter-Cable Machine Co.—A finishing sander incorporating a vacuum dust pick-up system. This portable electric tool, Model 127, is said to pick up 91% of the wood dust. Use results in 25% faster removal of stock and longer sandpaper life.

Suction is derived from a high-speed centrifugal fan mounted on the armature shaft. The motor has its own fan cooling system entirely separate from the vacuum system. A metal skirt around the base creates a continuous in-rush of air all around the pad to exhaust the dust at high speed into a bag at the rear.

The pad has a ¼ in. orbital motion and rotates at 4,000 r.p.m. under load. This rotary action simulates hand sanding to make the tool equally effective with or against the grain, and to eliminate scratch marks or gouging.

SPECIAL SANDING EQUIPMENT AND METHODS

Merit Products, Inc.—"Sand-O-Flex" all-purpose contour sander designed for use with present sanding tools. Gets at hard-to-reach places and speeds up work on any wood surface, curved, flat or recessed. Flexible brushes back up abrasive strips and make them conform to shape of object being sanded.

As abrasive strips become worn, twist of a knob feeds out fresh abrasive from reel inside wheel. Replacement strips are easily inserted.

Adaptors available for lathes, mandrels, drill presses, flexible shafts and portable electric drills.

Grinding & Polishing Machinery Corp.—A sanding wheel composed of alternate shredded abrasive tips and brushes, excellent for contour sanding. The abrasive strips, wound on a drum near the center of the wheel, protrude between individually mounted brushes to the wheel surface. These protruding tips are free to conform to the contour of the work and are held in contact with it by centrifugal force and the pressure exerted by the brushes.

The wheel is 11½ in. in diameter and has an overall width of 7⅛ in.

Highland Park Mfg. Co.—Model X-71 backstand idler with 9 in. wide pulley. Has a substantial cast-iron frame which, when mounted on floor or wall, easily supports the pulley. A well-constructed bracket is available for mountings requiring it.

The idler is equipped with a double spring tension device which facilitates accurate adjustment and positive tension. A single-screw, positive tracking device is located on the side parallel to the base so that a remote control arm may be used on this unit.

Stephen Bader & Co.—Belt sander designed originally for contour polishing in the metalworking field, said to be adaptable for use on formed wood parts in the furniture industry.

The machine is equipped with a quick-change mount for the contact wheel, and a front belt tracking arrangement. Various sizes and shapes of wheels can easily be interchanged by inserting the correct wheel assembly into the yoke or quick-change mounting device.

Editor's Note.—*The co-operation of Behr-Manning Corp., Troy, N.Y., in supplying most of the photographs and information used in this presentation is gratefully acknowledged.*

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minimum prices may be had on quantities of 100 of size and kind, in truckload or carload lots.

HARDWOOD PLYWOOD

Continued from Page 23

uniform grade designation. A second was *lack of information on physical properties,* and the third was *lack of availability at the retail level.*

Almost all customers were confused on the terminology for purchasing plywoods. After six months of conferences and hard work, our technical committee developed new grade designations which were adopted by members of the Hardwood Plywood Institute on October 15, 1953. These terms were decided upon because they were simple and understandable to the public, the final judge, whether it be a furniture item, a cabinet or a home interior.

The highest quality selected and matched panels are included in the *CUSTOM* grade which also includes plywood requiring special consideration as to technical requirements, wear resistance, strength factors, etc. These represent special agreements between buyers and sellers.

The top quality commercial panel is labeled *GOOD,* which means it is suitable for natural finish.

SOUND is the term to describe plywood for paint surfaces.

UTILITY is used for the grade suitable for structural use or where the panel is not exposed. There is also a "closure" or packaging grade identified as *REJECT.*

By adopting these names for the various grades we are going to avoid the confusion of the material or alphabetical designations now included in the Commercial Standards. Further, the terms can carry right from the specifier to the public as they are descriptive of the use.

With our quality control and trade marking program, simple understandable terms for our product, and a preliminary study of markets, we are ready to begin our active trade promotion. The theme will be the lasting beauty and utility of genuine wood, and while we naturally will slant it to the qualities inherent in hardwood plywoods the sales effort is bound to influence the use of solid lumber components which are a part of each item.

The basic phase of our program is the development of our new HPI catalog-sales brochure. We call it "A Treasury of Hardwood Plywoods." The lifetime appearance factors and wide selection will be featured. We also will list the physical characteristics of hardwood plywoods. These plus values of wood, which include rigidity, dimensional stability due to cross-ply lamination, the abrasive resistance of the various species, their sturdiness and resistance to impact, will be fully itemized for the first time, and we will introduce the new simplified grade descriptions.

We will describe some of the technical and marine applications, as well as custom-made architectural panels for banks, public buildings, etc. A page will be devoted to recommendations for installation and finishing and how to specify.

The plywood industry has been remiss in showing the customer how the product should be used. For too long, it has been a case of "Here is our product—you figure out how to use it.

In order to make our specific selling programs effective, we must pre-condition the public to obtain the greatest possible acceptance for hardwood plywoods. This phase of our program is also under a full head of steam. We estimate that we are obtaining a million reader impressions per day through our publicity in newspapers, radio, TV, and the magazines. There is a great style trend toward natural wood products, and by supplying photographs or suggestions of interesting installations to the magazines, we have obtained volumes of publicity.

We supply a news service to newspapers together with "how to do it" plan suggestions for hardwood plywood "do it yourself" projects. We supply personalized script for radio and TV use, and have had a tremendous acceptance of our copy. Over 300 stations use them regularly.

The purpose of all this work is to get the public to ask their sources of supply for hardwood plywood. Then, when mill salesmen or distributors approach retail dealers or industrial users, they will find a receptive interest. The dealer will recognize the profitable market which is available if he will stock and sell hardwood plywood.

The publicity releases reach most of the specifier groups as well. Through the "do it yourself" service we will contact a big share of the designers and purchasing agents for industrial accounts who represent the market for 20% of hardwood plywood production.

To reach the balance of our market, with 43.5% of the hardwood plywood going for construction purposes and 36.5% going to furniture, table tops, TV cabinets, etc., we must embark upon a rigorous sales program for all salesmen in our lines of distribution. This means starting with the manufacturer himself so that each member of his sales staff will be acquainted with the specific goals of our program and, in turn will be able to interpret them for his customers.

Training programs are being designed to show the advantages of hardwood plywood to all of the specifier groups, such as architects, designers and furniture salesmen.

We are just completing the initial phase of our training program at the distributor level and are preparing the material which the distributor himself will use in explaining our new grade descriptions and the uses for hardwood plywoods to the retail lumber dealer. Instead of just 57 members with some 500 salesmen, we will have 4,000 salesmen at the wholesale level if we can teach the distributor to do a job for us. If he in turn can get the retail lumber dealer to do the proper selling job, there is a potential of 60,000 salesmen, which will do much to capitalize on the huge "do it yourself" market.

This is our goal, and while it cannot be accomplished overnight, we feel confident that three times the present number of retail dealers will carry and be selling hardwood plywoods regularly by the end of 1954.

Here, in capsule form, are some of the specific selling plans which will be used in our program. They relate to current markets that need developing—markets lost through improper or inadequate selling.

One specific plan is built around the idea, "A Room to Match your Flush Doors," and the goal of added business to the industry is 100 million square feet of additional hardwood plywood during the year. Incidentally, some 50 million lineal feet of hardwood lumber will be required for trim, mouldings, faces, door edges, etc.

We have in preparation a "how to do it" brochure which will be distributed to every purchaser of flush doors through the distribution channels. The brochure will show details for installing and finishing hardwood plywood, and special reference is made to the use of the shorter lengths of panels and the parquetry arrangement which utilizes smaller pieces.

Presently there are more than 40 million natural-finished flush doors in service throughout the country, and 8 million new doors are installed every year. If we are able to convert one out of six of the new installations during 1954, we will attain our goal.

A source of substantial volume for lumber and plywood products, and a trend which bears watching, is the

package selling of precut, ready-to-assemble panels for various hobby and home projects. At least a dozen firms are doing an amazing volume in this line at the present time, using the standard lines of distribution as well as department stores, hardware stores, etc. Here again we note the close correlation between plywood and lumber products which are necessary to make a completed article. A number of firms offer packaged panels from which various items can be cut in a home workshop and each month send new ideas so that there is a continuous interest at the retail level.

Another specific selling plan involves prefinished flooring plywood blocks and wall panels. The plywood floor at the Hardwoods Exhibit at the Museum of Science and Industry in Chicago, which includes alternating maple and oak squares, is a hit of the show. Some of the major flooring people have gone into the business and many of the hardwood plywood producers are supplying the blanks from which are fabricated the flooring squares. National magazines plan articles on the design opportunities offered by plywood flooring squares.

Through our laboratory we have conducted tests on adhesive quality and plan to set up careful control measures so that every panel receiving the HPI label will have the type of adhesive practical for such floors and a three-generation performance can be expected. The market for floor tile or squares is well over one billion feet annually. We want to win back at least 100 million square feet. Other markets to be recaptured are air conditioning, trucks, transportation, and signs.

It takes money to institute a successful trade promotion program. We have to match the budgets and selling competition of organized groups within the metal, plastic and glass industries, tileboard and linoleum organizations. They have their packaged selling ideas well organized. It is high time that our industry groups analyze their market opportunities and dig down into their pockets so that they can inaugurate aggressive selling programs.

Few individual organizations in the wood industry can afford to undertake expensive trade promotion plans. However, in combination and with the proper co-ordination between groups, we can maintain and increase our sales penetration.

Editor's Note.—*The foregoing paper was presented at the recent two-day fall meeting of the Midwest Section, Forest Products Research Society, in Chicago.*

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•

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Bendix Mouldings, Inc.
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New York 16, N. Y.

•

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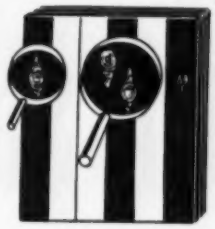

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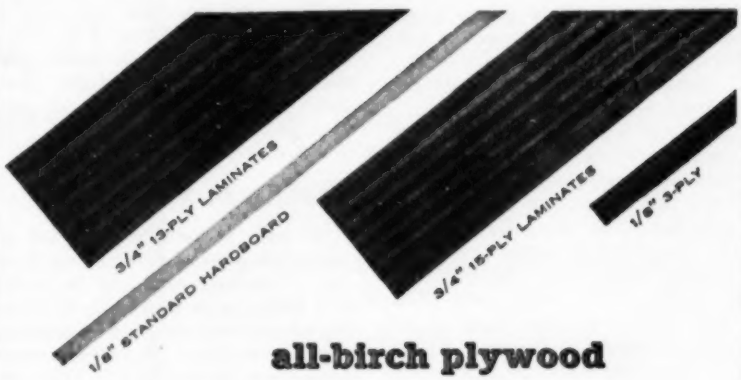

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TOM DEWEESE

DOWN NEAR THE CENTER of the Southern Pine belt, in a 10-county area of East Mississippi, a group of 47 woodland owners has formed a kinship in practical forestry that is serving as a model for landowners and lumber industries everywhere.

They call themselves the "DeWeese Tree Farm Family" because of their close forestry relations with the A. DeWeese Lumber Co. of Philadelphia, Mississippi. The company provides them free forest management services, and they supply the company with tree crops.

Just a few years ago, most of the woodland owners in the area did not know how their trees could be a cash crop. The DeWeese Company showed them how and began to offer technical forestry help and fire protection. The result has been increased profits both for company and landowners. A perpetual supply of timber has been assured the mill. And living standards in the area have been bolstered with growing bank accounts.

The "father" of this family of Tree Farmers is a 39-year-old Mississippi lumberman, Tom DeWeese. As president of the A. DeWeese Lumber Co., he has headed the program of helping landowners of the area with valuable forest management.

Tom DeWeese has been close to the shouts of "timber!" and the whir of the sawmill all of his life. He was born in the Mississippi town where his father founded the A. DeWeese Lumber Co. and has spent most of his lifetime there. His interest in lumber progress, however, has spread far beyond Philadelphia, Mississippi. Today he is considered one of the outstanding leaders in the Southern Pine industry.

Though one of the younger lumber manufacturers in the South, Mr. DeWeese has long been active in the work of the Southern Pine Association. He now serves as first vice-president and is chairman of the organization's Trade Promotion Committee.

In addition, he is on the board of governors of the Southern Pine Inspection Bureau and is a member of the Southern Pine Industry Committee. He is vice-president of the Mississippi Forestry and Chemurgic Association.

With all his other activities, Mr. DeWeese still finds time and enthusiasm for the DeWeese Tree Farm Family. He feels it is in such a plan that the roots of an industry grow deepest, the prosperity of an area more profuse.

CARLILE P. WINSLOW

No man is indispensable. Yet it's anybody's guess what the Forest Products Laboratory would be like today if it hadn't been for Carlile P. Winslow. Associated with this internationally famous forest products research center from its founding in 1910 until his retirement in February, 1946, "Cap" Winslow guided the phenomenal expansion and development of the Laboratory for nearly 28 of these productive years.

Named director in April, 1917 at the beginning of World War I, Mr. Winslow pitched in to help solve such pressing problems as development of waterproof glues for use in airplanes, proper drying schedules for airplane and other woods, and the design and construction of shipping containers for war supplies. He also had to build up the Laboratory's facilities, then few and crude.

Mr. Winslow anticipated the need for wartime research in both wars even before other war agencies and private industry became aware of them, and he devoted considerable time in acquainting leaders of the armed forces and industry of the Laboratory's facilities and ability to do this work.

A peacetime accomplishment under Mr. Winslow's directorship was the pioneering in 1935 of an all-wood prefabricated system of house construction, widely adopted by manufacturers to meet wartime housing needs in defense areas and continued as well in recent years.

One of Cap Winslow's greatest concerns has always been the development of methods for reducing waste in all forest products industries. A graduate engineer from the Sheffield Scientific School of Yale University in 1905, he also has always been keenly interested in problems of construction with wood.

Recognition of his leadership in the field of wood research has included: appointment by the Oberlander Trust of the Carl Schurz Foundation in 1937 to a fellowship that permitted him to study European wood utilization techniques and developments; appointment in 1943 as head of a U. S.-Canada Aircraft Mission to England in connection with use of wood in United Kingdom aircraft construction; and selection in 1945 as European representative for forest products under the Joint Chiefs of Staff.

Mr. Winslow is a life member of the American Society of Civil Engineers and a Fellow of the Society of American Foresters among many others.

Currently Mr. Winslow is available to the Forest Service as a consultant in forest products, and he has recently devoted considerable time and energy to campaigning for increased funds for the Yale Forestry School.

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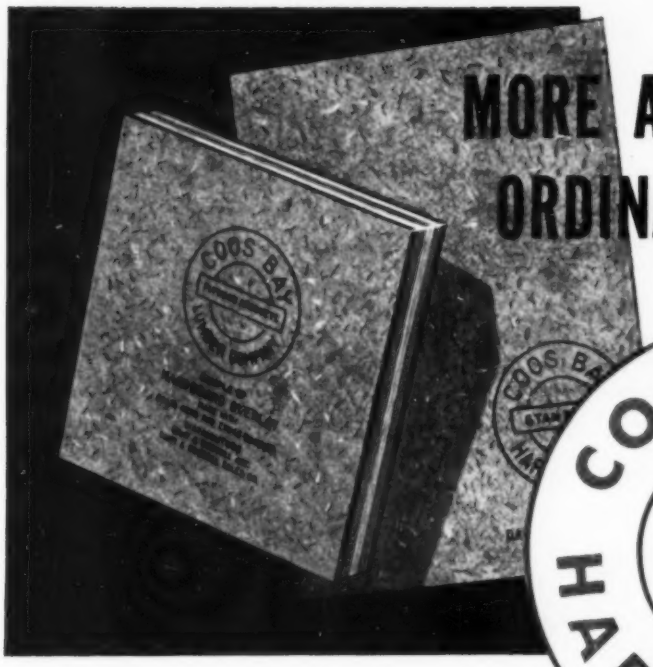

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